CHANGES IN CHILDREN'S
PERSONAL AND SOCIAL BEHAVIOR
AS A RESULT OF INTERACTION
WITH TRAINED UNDERGRADUATES

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ABSTRACT

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The purpose of the present investigation was to study systematically the effects of training college students in skills associated with effective interaction in an adult-child play relationship. The effects of training were investigated in two general areas: changes in the behavior of the undergraduate and changes in the behavior of children as a result of interaction with undergraduates in training.

Nine college undergraduates were trained over a period of one academic year to be effective with children. Training occurred primarily through didactic instruction in play techniques and through a supervised experiential play relationship with a non-disturbed child. Interaction between the student and child occurred weekly. In addition, a control group of nine undergraduates also engaged in weekly interaction with a particular child. These undergraduates received neither supervision nor educational instruction in play techniques.

Through an analysis of video tapes of the student-child interaction in the 1st, 7th, 13th and 20th play sessions, behavioral changes of both the 18 undergraduates and the 18 children were assessed. Behavioral changes of the children were also assessed three times during the year in an unstructured group situation involving three children. The behavior categories used for assessing changes in undergraduate behavior were

developed from writings of client centered play therapists and from research on parent-child relationships. Behavior categories used to assess changes in children's behavior were developed from a broad definition of positive functioning in children, which construed effective functioning in terms of verbal comprehension skills, coping behaviors, and interpersonal skills.

Correlational analysis of the categories indicated that student behavioral differences clustered in terms of a permissive-restrictive dichotomy and children's categories clustered in terms of fantasy behaviors, reality oriented behaviors, and social distance behaviors. Analyses of variance indicated that experimental children engaged in overall greater frequencies of fantasy behaviors, including fantasy aggression, and social distance behaviors, whereas control children demonstrated overall significantly greater increments in Excitement behavior. Analyses of variance of student behaviors indicated that trained undergraduates demonstrated overall greater increments in permissive behaviors, whereas the control students overall engaged in significantly more restrictive behaviors. Explanations for the relationship between permissive behavior and fantasy behavior were discussed.

Results broadly suggested (1) that the training of college students did effect a stylistic change in their interactional behavior, (2) that children who interacted with these students demonstrated behavior change within the sessions which could be attributed to the process of achieving ego mastery, (3) that outcome measures used to assess change outside the experimental setting were inadequate, and (4) that much of the behavior of the untrained control students could be construed as less than ideal, and perhaps indicative of the average college student's understanding of

and attitudes towards children. Implications for training and the education of college students in mental health skills, for child development, and for further research in these areas were discussed.

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By

Thomas Reif

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TO MY PARENTS

IN ACKNOWLEDGEMENT

Of Gary Stollak, whose disinclination to intervene is a profound calling to one's own energy, and means helping by not helping, convincing by not convincing, guiding, not with words or deeds, persuasion or insistence, but by being there. Only then is learning a genuine contact and teaching truly masterly. This was what the pupil received from his teacher.

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Of the children and students of the study, who unempirically grew, defying all statistics.

Of Sam Plyler, who said an immense amount in a few words.

Of Ellen, who always looked in my eyes when I stared at the typewriter, and who held everything together more than once.

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CHAPTER ONE

INTRODUCTION

Overview

The purpose of the present investigation is to study systematically the effects of training college students in skills associated with effective interaction in an adult-child relationship. The effects of training are investigated in two general areas: changes in the behavior of the undergraduate and changes in the behavior of children as a result of interaction with undergraduates in training.

In recent years, the use of "nonprofessionals" as agents of behavior change has become an issue of increasing importance to various "helping" disciplines. The issue has increased in importance both as a result of the shortage of professional personnel and as a result of serious questions about the efficacy of traditional intervention techniques.

Several assumptions underlie the basic approach and design of this study. To varying degrees, these assumptions have theoretical and empirical support. The assumptions will initially be offered here, to be followed by a discussion of their formulation.

Assumptions

1. There is a vital need for broadening our current conception of the mental health worker to include sub- or nonprofessionals not tradition-

ally associated with psychologically therapeutic and/or preventive roles.

2. While the nonprofessional has been shown to be capable of performing some traditionally professional roles, there has been little empirical evaluation of their effectiveness as agents of behavior change. While this criticism is levied at the nonprofessional, it applies to all research in psychotherapy. Research should therefore concern itself with the effectiveness of all individuals involved in "helping" professions, both in terms of interactional process and in terms of client outcome.

3. In an adult-child relationship, certain responses of the adult can facilitate the child's interpersonal and intrapersonal development. These responses generally involve a communication of understanding and respect and a willingness to participate with the child in his mastery of various tasks and emotional states.

4. Positive mental health in children may be associated with certain behaviors, including verbalizations of awareness about the self and others, coping behaviors such as the appropriate expression of aggression, fantasy play, and mastery of objects, and interpersonal behaviors such as cooperation, affection, and attention to and recognition of another person.

5. One effective research design involves the use of training control groups, i.e., groups which have similar contact with similar frequencies, but which are not exposed to the behaviors presumed responsible for change.

6. Outcome research generally fails to measure behavior outside of the experimental setting. A more effective and valid assessment of

outcomes can occur through the measurement of behavior in a variety of settings.

PART ONE

THE NONPROFESSIONAL

The Manpower Shortage

Within the last decade there has been increasing attention paid to the unmet social needs of large segments of the population, including needs related to mental health. Hollingshead and Redlich (1964) found the sole determining factor in what kind of mental treatment an individual received was his socioeconomic class. Hobbs (1964) deplores such findings, yet quite optimistically states that we are in "mental health's third revolution":

> Pinel led the first, bringing humane concern for the mentally ill; Freud led the second, bringing passionate attention to the intrapsychic life of man; the third revolution, now in the making, is appropriately a corporate effort without an eponym as yet. Mental health, always a public health problem, is finally adopting public health strategies, with strong support from some quarters and resistance from others. (p.1)

Given this awareness of the direction which mental health services seem to be approaching, there have been frequent conferences on the lack of available manpower. In a monograph prepared for the Joint Commission for Mental Health and Illness, Albee (1963) warned that the limitations on numbers of personnel who were available for professional training in mental health was increasing. Within the next few years, the demand for professional services will greatly exceed the supply of workers. In a series of discussions, Hobbs (1963, 1964, 1964a) has repeatedly stressed the profound lack of personnel, under the qualifications currently set

forth for involvement in mental health work. Guerney (1968) reiterates all of the above. He speculates that our awareness of the manpower deficit is due to an increasing sense of social responsbility in all areas of public welfare. He also credits the awareness of the manpower problem to a gain in faith in the effectiveness of mental health services.

An awareness of the manpower problem is only a small part of what most writers consider to be a greater issue, that of Hobbs' third revolution. This revolution essentially rejects the medical model of abnormal behavior and concerns itself with problems in living of all individuals (Szasz, 1960). The revolution also stresses the assumption of public responsibility for the development, treatment, and prevention of mental illness. Implicitly, the efficacy of the traditional one to one, fifty minute hour, as a preferred means of intervention, is seriously questioned. Hobbs (1964) argues that at least fifty percent of all work done in the community mental health center should be aimed at developing preventative techniques with children. This emphasis would facilitate reaching as many individuals as possible.

Reiff (1966) suggests two alternative solutions to the manpower problem. One alternative is to set in motion the currently existing mechanisms to produce more of what is already available to the public, e.g., psychiatrists, psychologists, and social workers. Another alternative is to distribute professional roles over a wider range of the population. That is, traditional "professional" services may be assumed by less highly trained, nonprofessional individuals. Reiff also suggests that, given the current trend described, neither of these approaches is a suitable solution to our mental health needs. He argues that the training of more professionals is a physical impossibil-

ity, and the distribution of professional roles into subprofessional classifications results in a stagnant maintenance of the status quo. One assumption implicit in dividing up professional responsibilities is that the only problem is one of manpower shortage. That is, the efficacy of existing techniques is not questioned. These techniques are simply alloted to other individuals. Reiff argues against that assumption:

> Nothing could be farther from the truth. The mental health professional's posture is not that of a group of people with a successful product harrassed by a clamoring demand, it is more like a group of desperate men struggling to hold back a flood, and who cannot find the hole in the dike. (p. 544)

The implications of Reiff's argument are far reaching. They suggest that (1) empirical justification of the professional's services is grossly lacking, (2) that our needs to resolve the manpower shortage may cause us to forget about evaluating those techniques we want others to assume, and (3) all techniques, either existing ones or newly developed strategies, must take into account the degree to which large numbers or people are assisted in dealing with life's problems. The latter implication suggests that the distribution of professional roles to less trained personnel is ill advised, unless these roles are meeting the needs of the people.

Because of the multi-dimensionality of the manpower problem, i.e., needing more services, more services which effectively reach larger numbers of people, and more evaluation of these services, research in the area of nonprofessionals must necessarily deal with several issues. A major issue appears to be the degree to which nonprofessional can be trained to be effective with people. Another issue appears to be the degree to which skills which the nonprofessional develops are indeed effective. A final issue appears to be the degree to which the non-

professional influences large numbers of people.

Guerney (1968) refers to the training of nonprofessionals and the simultaneous evaluation of their skills as a "bidirectional approach". Bierman (1969) advocates this kind of research:

> Twin issues are opening up for investigation: the modification of interpersonal behavior repetories of child care agents via modeling and behavior shaping procedures and the effects of the modified behavior repetories on children. (p. 349).

Teachers, parents, undergraduates, and other nonprofessional personnel who function within currently existing institutions such as the school, the community, and the family, can facilitate change. The training of nonprofessionals may increase the effectiveness of (or initiate) that change.

Research Directions in the Use of the Nonprofessional

To give some indication of the increased use of the nonprofessional in the mental health field, Golann (1968) has conceptualized the strategies of community psychology into four categories: (1) helper linked strategies, such as mental health lay counseling, (2) service linked strategies, such as using parents as behavior therapists, (3) recipient linked strategies, such as those involving specific populations, e.g., pregnant women, and (4) location linked strategies, such as community action programs. In all of these varied strategies, non professionals, such as housewives, college undergraduates, and undefined volunteers have served in positions of primary responsibility.

The research on the use of the nonprofessional in the mental health field has been extensively documented by Carkhuff (1968) and Guerney (1968). With the compilation and comparisons of all studies in this area, several directions for future research become evident.

Essentially it has already been demonstrated that nonprofessionals can be trained to perform presumably therapeutic behaviors in interaction with people seeking help. Studies demonstrate that increased ratings of empathy, genuineness and nonpossessive warmth occur as a result of minimal training of hospital attendants, college undergraduates, school teachers, and community volunteers (Carkhuff, 1968). Research has also demonstrated that parents (Guerney, 1966, Stover and Guerney, 1967) and college students (Stollak, 1968, Linden and Stollak, 1969, Zax, Cowen, and Laird, 1967) and housewives (Rioch, Elkes, Flint, Udansky, Newman and Sibler, 1963) can be trained to perform presumably therapeutic behaviors with disturbed children.

There is a more limited indication that nonprofessionals can cause

constructive client change. Carkhuff (1968) lists over 20 studies in support of this conclusion. Few, however, can be considered adequate in terms of validity and/or research methodology. For example, Poser (1966) reports that college undergraduates caused significant behavioral changes in chronic schizophrenics through group psychotherapy. Change is measured by test-retest scores on digit tapping, visual reaction time, word associations and other dubiously relevant outcome measures. In addition what the undergraduates did in their interactions with the patients is not reported (Rosenbaum, 1966). Another study (Harvey, 1964) reports that community volunteers are successfully used in marital counseling in Australia. Success is only reported and no data are offered to support the conclusion.

From the two general findings discussed, and from an examination of the literature to which these findings refer, there appear to be several lacks in the research on the use of the nonprofessional. While the deficiencies refer to the literature of the nonprofessional, they are also relevant to research in psychotherapy in general (which will not be reviewed here).

The most obvious problem is the lack of empirical studies, particularly in connection with outcome. Of the 20 studies summarized by Carkhuff (1968), only five have empirically demonstrated the effectiveness of the nonprofessional in terms of some kind of outcome measure.

A more subtle problem has to do with the tendency to restrict investigations to either the training process, e.g., Linden and Stollak, (1969) or to the outcome of nonprofessional intervention, e.g., Poser (1966). Specifically, there exists abundant evidence that nonprofessionals can be trained to function at high levels of empathy, genuine-

ness, and nonpossessive warmth (Berenson, Carkhuff and Myrus, 1966, Carkhuff and Truax, 1965, Demos, 1964). In addition, there are approximately 20 studies which support the idea that nonprofessionals can cause constructive client change. Then there is the third area of research which investigates the central ingredients of effective psychotherapy. Most often these are found to be empathy, genuineness, and nonpossessive warmth (Truax and Carkhuff, 1967). The relationship between the ability to assume supposed effective psychotherapeutic behavior and the effectiveness of these behaviors has thus far come mainly through the juxtaposition of these three kinds of investigations. Ideally, integrated studies are needed which simultaneously demonstrate the ability to assume effective behaviors on the part of the nonprofessional and the specific effects of these behaviors on measures of client outcome.

A third obvious deficiency in the research conducted thus far has been the relative absence of adequate control groups. Frank (1959), and Imber et. al (1957) have suggested the problem to be characteristic of all forms of intervention research. The most frequently used control group is the "no treatment control". This group represents people who are in need of help, but who receive no treatment from a mental health facility. Unfortunately, it has been found (Frank, 1959) that these controls often seek help elsewhere. Also, no treatment is sometimes considered unethical. Finally, "no treatment" control groups leave room for any part of the human contact to be responsible for constructive client change.

Other kinds of control groups have been suggested. For example, Heinicke (1965, 1969) has compared the effects of two different treat-

ment conditions of the readjustment on disturbed children. The treatment conditions differed in frequency of therapy sessions-once weekly vs. four times weekly. Carkhuff (1968) emphasizes the importance of comparing different kinds of treatment in evaluation the skills of the nonprofessional:

> Of course all this is not to say that any form of psychological treatment is significantly more effective in eliciting constructive client movement and outcome than other forms of activities. In order to determine this, studies are needed which incorporate treatment control groups of patients which meet for the same amount of time for different kinds of activities. (p. 122)

In conclusion, future research in the training and the effectiveness of nonprofessionals might beneficially attempt to incorporate at least three relatively unexplored means of evaluation: (1) more rigid objectification of data, (2) the inclusion in the same study of an analysis of both the effects of training nonprofessionals on the behavior of the nonprofessional, and on the behavior of the client with whom the nonprofessional comes in contact, and (3) the use of training control groups in an attempt to specify the process variables associated with successful outcome.

Effective Interaction With Children

The present section discussed those behaviors which might be emphasized in training nonprofessionals to be effective in their interaction with children. Data are drawn from two sources: the writing of client centered play therapists, and research in parent child relationships.

Client Centered Approaches

In general, all client centered play therapists emphasize the importance of communicating to the child an understanding of his feelings, thoughts, and behavior in an atmosphere of warm, permissive acceptance (Ginott, 1961, 1966, Moustakas, 1959, Dorfman, 1951, Axline, 1947). Thus Moustakas (1959) writes:

> ...The therapist listens in order to understand and empathize with the emotional expressions of the child...In therapy the child feels the complete, undivided attention of the adult... He feels the warm human empathy of the adult...the therapist conveys his unqualified acceptance and respect...Thus in this approach to child therapy, the central focus is on the emergence of a significant relationship in which the adult maintains a deep concern for the growth of the child, a special interest in his individuality, and an educated talent for sensing, feeling, understanding, examining, and exploring the child's experience with him. (p. 3-6)

In play therapy, the therapist's communication of understanding of the child is expressed primarily through reflective behavior (Moustakas, Sigel, and Schalock, 1956, Truax and Carkhuff, 1967). Ginott (1966) gives an example in which reflective behavior is used during a typical home crisis:

> When a child tells us, "The teacher spanked me", we do not have to ask him for more details...we know that a child must feel when he is shamed in public...we so phrase our words that the child knows we understand what he has gone through. Any of the following statements would serve well:
>
> It must have been terribly embarrassing.

> It must have made you furious.
> You must have hated the teacher at that moment.
> It must have hurt your feelings terribly.

The purpose of reflective behavior is to provide the child with knowledge about himself.

> How can we help a child know his feelings? We can do so by serving as a mirror to his emotions. A child learns about his physical likeness by seeing his image in a mirror. He learns about his emotional likeness by hearing his feelings reflected by us. (Ginott, 1966, p. 27)

The communication of acceptance of the child essentially occurs in an atmosphere of warmth and permissiveness. Behaviorally, permissiveness occurs through the relative absence of limits, directions, or controls (Axline, 1947, Moustakas, 1959, Ginott, 1966). This does not imply the absence of appropriate limits, as the following example demonstrates:

> Tim: This isn't your house. I'm going to stay.
> Mr. M: You say you're not, but I say you are.
> Tim: You're a bad boy. My daddy will come and beat you up.
> Mr. M: I won't let you stay so you want to hurt me.
> Tim: My mommy will come and play with me and stay and we'll never leave. I'm going to tell her how you're bad. You'll see. She'll come. This will be our home.
> Mr. M: I understand how much you want to have here here, but when you walk out the door I'll close the room and you won't be able to come back until next week. (Moustakas, 1959, p. 48)

All of the writers agree that when limits must be set, they should be set with sufficient explanations.

Warmth is expressed to the child in many ways. One frequent behavioral expression of warmth is through praise. Ginott (1966) warns against associating the quality of the child's productions with the quality of his being. Praise can be helpful or unhelpful. An example of helpful praise would be "Your letter brought me great joy", since the child infers from this statement, "I can bring happiness to others".

This represents a realistic assessment of himself. Unhelpful praise, such as "When it comes to letters you are wonderful", give the child an unrealistic perception of his capabilities.

Behaviors which might be contraindicative of warm feelings towards the child are ones which essentially convey disapproval, rejection, or dislike of the child as a person. Client centered therapists distinguish between disapproval of the child's behaviors and disapproval of the child's self, the latter being detrimental to the child.

Another behavior which is stressed by client centered therapists is the statement of the therapist's own feelings, and his general comfort with himself.

> I saw that I must stop playing the role of the professional therapist and allow my potentials, talents and skills, my total experience as a human being to blend naturally into the relationship with the child. (Moustakas, 1959, p. 201)

Ginott (1966) recommends that parents verbalize their own feelings in times of frustration with the child. For example:

> When I see the shoes and the socks and the sweaters spread all over the floor, I get angry, I get furious. I feel like throwing the whole mess into the street. (p. 58)

Finally, a basic attitude common to most client centered play therapists is that "the therapist does not attempt to direct the child's actions or conversations in any manner. The child leads the way, the therapist follows" (Axline, 1964). This suggests that the therapist would tend to ask few questions, would comply with the requests of the child, and would participate with the child in his fantasy play in a reciprocal fashion.

Research in Parent-child Relationships

Several studies have investigated those parent behaviors and attitudes which are associated with some aspect of effective psychosocial functioning in children. The findings are not always consistent. This is perhaps due to the many variables studied, the differences in definition and methodology, and the importance of intervening variables.

Coopersmith (1967) studied children with varying degrees of self esteem. Subjects were public school children, judged by both subjective and behavioral indices. Differences in degrees of self esteem were associated with differences in child rearing practices. Generally, it was found that the antecedents of self esteem could be described in terms of three conditions: (1) total or nearly total acceptance of the child by the parents, (2) clearly defined and enforced limits and (3) the respect and latitude that exist within the defined limits.

> In effect we can conclude that parents of children with high self esteem are concerned with and attentive towards their children, that they structure the worlds of their children along the lines they believe to be appropriate, and that they permit relatively great freedom within the structure they have established. (p. 236)

Baumrind (1967) compared three groups of nursery school children who were assessed through naturalistic observation to be characterized by different degrees of social competence. She compared a group which was self reliant, assertive, self controlled, buoyant and affiliative with a group considered lacking in self control, lacking self reliance, and tending to retreat from novel situations, and with a withdrawn, discontent and distrustful group. Parents of these three groups of children were given questionnaires and observed in home interaction with their children. Results showed that parents of the first group were, controlling, demanding, communicative and loving, parents of the

second group were non controlling, demanding and warm, and parents of the third group were controlling and detached.

Further analysis of the data from same subjects yielded the following specific results: (1) Parental warmth is not an important predictor of child behavior; (2) Punitive attitudes were not associated with fearful or compliant behavior. On the contrary, particularly for girls, they were associated with independent and domineering behavior. (3) Consistent parental discipline was associated with independence and assertiveness in boys and affiliativeness in girls. (4) Maternal maturity demands were also associated with independence and assertiveness in boys and in girls. (5) Verbal give and take by parents when controlling their children was associated with social competence in children. (6) Restrictiveness and refusal to grant sufficient independence was associated in boys with passive and dependent behavior. (Baumrind and Black, 1967). The authors conclude:

> ...the findings suggest that parental practices which are intellectually stimulating and to some extent tension producing (socialization and maturity demands, punitiveness, firmness) are associated in the young child with various aspects of competence... (p. 327)

Hoffman (1963) studied the parental correlates of children who were judged considerate of others. Results showed that parents who, in the context of a non-power relationship with their children, were: (1) warm, (2) clear about the consequences of their children's behavior towards others, and (3) explanatory while administering discipline or punishment, had children who were highly considerate of others.

Hatfield, Ferguson, and Alpert (1967) studied the interactional behavior of 40 mother-child pairs during two half-hour periods. Maternal

behavior variables and child behavior variables were investigated. Groups of child behaviors investigated included dependency-independence, warmth and achievement, aggression, adult role behavior, reactions to deviations and identification. Some of the major findings were the following: Boy's dependency was related to maternal warmth whereas boy's independence was associated with low maternal directiveness, low maternal hostility and low maternal use of models. Girl's dependency was related to the mother's rewarding of dependency and her lack of concern with neatness, whereas girl's independence was related to maternal pressure and maternal rewarding of adult role behavior. Boy's indirect aggression was associated with maternal hostility and punitiveness, whereas girl's indirect aggression was associated with maternal punishment of both dependency and independence behaviors. Adult role behavior in boys was associated with maternal laissez faire behaviors and in girls with maternal use of models and maternal comfort with feminine identity. Factor analysis of maternal behaviors resulted in two orthogonal dimensions, laissez faire vs. involvement and love vs. hostility. Various behaviors associated with each of the quadrants were discussed.

Rowland and Ferguson (1969) analysed mother-son interaction sequences in responses to the son's frustration. S's were 30 boys, age 7-9, and their mothers. A high and a low group were differentiated in terms of teacher's ratings of boys' self control, self-sufficiency, and achievement motivation. An extremely difficult puzzle represented the frustration situation. Results were analyzed in terms of both behavioral observations and circumplex ratings of verbal behavior. In the behavioral observation, results indicated High (self

control, self sufficiency, achievement motivation) boys reacted to the frustration with constructive responses, whereas lows tended to become aggressive and regressive. High mothers responded nondirectively to their son's behavior; Low mothers tended to respond negatively and restrictively. Response distributions of each of the boy's behavior variables were also analysed. One important finding was that High mothers responded to the boy's constructive activity significantly more nondirectively, whereas Low mothers responded to the same behavior negatively. Sequential analyses of both mother-son and son-mother interactions were also performed. One general finding was that interactions of mothers of Low boys could be described as maintaining a relationship where the mother is dominant and protective, and the son is dependent and negative. Interactions between High mothers and their sons were described as "mutually assertive" in which the son is positive, assertive, and self sufficient and the mother is willing to grant autonomy to her child.

Becker (1964) has organized a comprehensive review of research on "Consequences of parent discipline". His findings are summarized in terms of two dimensions: permissiveness vs. restrictiveness and warmth vs. hostility. Some of the findings were:

> The counter aggression generating properties of hostility are apparent in both permissive-hostile and restrictive-hostile parents. In the former, aggression is expressed with little control. In the latter, aggression is expressed in certain safe areas (with peers) but is more likely to be inhibited and turned against the self, or be revealed in manifestation of internal conflict...
>
> The findings for the warm-permissive condition are associated with maximizing socially outgoing characteristics and individuality. The child with warm-permissive parents is socialized mainly through love, good models, reasons and a trial and error learning of hos his actions (which are a bit uncontrolled at times) have an impact on others... (p. 198).

In a comprehensive review of investigations in the "Dimensions of Interpersonal Facilitation," Bierman (1969) discussed behaviors which have been associated with the facilitation of the child's well being. "Democratic guidance and stimulating expressiveness in the context of warm acceptance and attentive understanding would appear to provide optimal conditions for child well being" (Bierman, 1969, p. 348). Bierman stresses, however, that the dimensions of interpersonal facilitation have been demonstrated by prior reseach in social behavior to be orthogonal. That is, the same behavior occurring in the context of warmth (as opposed to hostility) can have a different effect on the child.

In summary, the larger studies on parent-child interaction (Becker, 1964, Hatfield, Ferguson, and Alpert, 1967, Baumrind and Black, 1967 and Rowland and Ferguson, 1969) have demonstrated the importance of the interaction context of behaviors in determining the effects of specific discrete behaviors which are associated with children's effective functioning without considering these behaviors in the context of many other variables. Nevertheless, the findings from research in parent-child relationships suggest certain behaviors to be more frequently associated with effective functioning children. These behaviors are incorporated in the following paragraph.

Effective Responses

Drawing from all of the above, the emphasis in training college undergraduates to be effective in their interactions with children might be on the following behaviors: (1) behaviors associated with understanding the child, e.g., Reflection of verbal content, Reflection of feelings, Reflection of motor behavior, and Interpretation; (2)

behaviors associated with the expression of positive feelings towards the child, e.g., Praise of behavior, Affection, and global Warmth; (3) behaviors associated with appropriate control and participation, e.g., Setting limits with explanations, Orienting, Clarifying compliance, Giving help, and Reciprocal participation in fantasy behavior, and (4) behaviors associated with the undergraduate's expression of himself as an individual, e.g., Statements of own emotion and global Genuineness.

Those behaviors which might be de-emphasized on the basis of the findings in the literature are: (1) behaviors associated with non acceptance of the child, e.g., Criticism, Asking questions, Praise person on the basis of behavior, and global Rejection-hostility, and (2) behaviors associated with over or under control of the child, e.g., Direction, Setting limits without explanations, Initiating fantasy behavior, Non attention, and Unclarified compliance.

PART TWO

POSITIVE MENTAL HEALTH IN CHILDREN

The present section examines some behaviors which might be associated with mental health in children, i.e., effective psychosocial functioning.

Determining what behaviors might be associated with mental health is an evaluative process, bounded by cultural expectations, social roles, self expectations and moral values. Psychologists have repeatedly offered constructs of mental health, e.g., Maslow (1950), Lindemann (1953), Foote and Cottrell (1955), Allport (1960) and Bessell and Palomares (1968). Jahoda (1958) summarized the constructs proposed at that time: self acceptance, growth, development and actualization, integration, autonomy, adequate perception of reality and environmental mastery. Smith (1959) notes: "The inventories repeat themselves... since each is proposed by a wise psychologist who scrutinizes previous proposals and introduces variations and emphases to fit his own values and preferences...(p. 304).

The problem then seems to involve an adequate translation of conceptualizations of mental health into more specific behaviors. The present study attempts to derive specific behaviors which would be expected to occur under optimal conditions of playroom interaction with an effective adult, and which would be consistent with the conceptualization of mental health proposed by Bessell and Palomares (1968). Bessell and Palomares (1968) discuss the effective communication of awareness of one's self and of others, mastery, and effective social-

ization as three important areas of effective functioning. Effective communication of awareness refers to the ability of the child to comprehend and verbalize the feelings, thoughts and behaviors of one's self and of others. Theoretically, children's awareness of themselves and of others may serve to circumvent the mechanism of repression and subsequent pathological defense mechanisms.

Mastery refers to effective coping, both in terms of the acquisition and possession of skills, and in terms of the successful management of drives and effectance needs. According to Bessell and Palomares (1968), effective coping is associated with a high degree of self confidence.

Effective socialization refers to the ability to establish good social relationships. Children's development of interpersonal skills is important in the total socialization process, i.e., alienation and rejections from peers and authorities can be associated with psychopathology (Szasz, 1960).

Assuming these constructs to be important in the effective functioning of the child, certain behaviors hopefully would be facilitated in interaction with a trained college undergraduate. Specifically, one might expect an increase in (1) verbal behaviors which communicate a comprehension of one's own feelings thoughts and behaviors and of other's feelings thoughts and behaviors, (2) coping behaviors which reflect the child's attempt to acquire skills and manage drives and other needs, and (3) interpersonal behaviors which increase the quality of the relationship between the undergraduate and the child.

The specific children behaviors which appear to be relevant in assessing the efficacy of training undergraduates in interactional

skills are derived from the three general behavior categories described above. The behavior categories associated with the general category of verbal comprehension skills are: (1) Statement of personal thought or behavior, (2) Statement of personal feelings, (3) Statement of other's personal thoughts, behavior or feelings, and (4) Statement of expectation, intention, or prediction. The behavior categories associated (positively or negatively) with the general category of effective coping behavior are: (1) the attempt to develop skills with objects (Object mastery), (2) the expression of Aggression, (3) Fantasy behavior, (4) switching interest or activity (Change involvement), (5) expressing affect diffusely (Excitement), and (6) Seeking help. The behaviors associated (positively or negatively) with the general category of Interpersonal skills are: (1) expressing Affection, (2) assuming the dominant role (Dominant participation), (3) not paying attention (Non attention), (4) Direction of the undergraduate, and (5) Not responding to the undergraduate (Non recognition).

Research Findings

This section presents a brief review of some of the findings relevant to the behaviors enumerated above. Findings are generally discussed in terms of studies of children's awareness behaviors, children's coping behaviors, including aggression and fantasy, and children's interpersonal behaviors.

Studies in children's comprehension of feelings thoughts and behaviors have, with a few exceptions, been limited to verbal responses to pictorial content. For example, Dymond (1952) compared second graders with sixth graders on their responses to a modified TAT with the attached question of "What do you suppose they are thinking and

feeling?" The major findings of studies of children's responses to pictorial content are: (1) Age is a significantly associated with the comprehension and expression of feelings, thoughts and behavior (Gilbert, 1969, Whiteman, 1967, Feshbach and Roe, 1967, Ruderman, 1962, Dupont, 1959, Dymond, 1952), (2) Positive feelings are more frequently expressed than negative ones (Dupont, 1959, Whiteman, 1967), (3) Children tend to describe feelings instead of labeling them (Feshbach and Roe, 1967, Dupont, 1959), (4) Socioeconomic levels (Whiteman, 1967) and religious affiliations (Gilbert, 1969) are associated with different degrees in awareness of affect and antecedent of defensive mechanisms, and (5) The child who is able to verbalize feelings "is more likely to express a range of affects and to be empathic, imaginative and joyful (Gilbert, 1969), The child who is casually oriented, i.e., aware of casuality in interpersonal relationships, is more likely to be less anxious, more democratic in attitude, more tolerant of ambiguous stimuli, less intrapunitive, and more concerned with understanding before deciding (Ojemann, 1955).

Two behaviors defined in this study as coping responses (fantasy and aggression) have received considerable emphasis in research in doll play. With respect to aggressive behavior the major findings are that (1) aggression increases from session to session (Hollenberg and Sperry, 1951, Levin and Sears, 1956, Phillips, 1945, Pintler, 1945, Sears, 1951, and Siegel and Kohn, 1959), (2) Boys are more aggressive than girls (Krall, 1951, Johnson, 1951), and (3) The presence of an adult can facilitate the expression of aggression (Sears, 1951, Yarrow, 1948, Hollenberg and Sperry, 1951, Siegel and Kohn, 1959). All of the findings concerning aggression in doll play are summarized by Levin and Wardell

(1962).

A significant finding in several studies investigating adult-child relationships in a playroom setting has been the association between the expression of aggression and negative attitudes and a warm permissive atmosphere (Landisberg and Snyder, 1944, Moustakas, 1955) and reflective behavior, (Stover and Guerney, 1967, Stollak, 1968).

Extensive research on children's aggressive behavior has been done outside the playroom setting, e.g., Bandura and Walters, (1959), and Sears, Maccoby and Levin (1957). However, these studies will not be discussed here.

Children's fantasy behavior has, with the exception of doll play research, not been the subject of much empirical research (Klinger, 1969). The dimension of "stereotyped responses" in doll play research has essentially investigated the degree to which toys (dolls) have been uses "appropriately and in routine action and situations" (Levin and Wardell, 1962). What is referred to in this study as Fantasy behavior (Appendix F.) is referred to in doll play research as "nonstereotyped responses". The findings with respect to this variable are: (1) Girls show more stereotyped responses than boys, (2) the amount of stereotyped responses decreased from session to session, and (3) "high levels of experimenter interaction" have been associated with nonstereotyped responses (Pintler, 1945).

Studies of children's interpersonal behavior in interaction with significant adults have already been discussed in the review of research in parent-child relation. Other studies have investigated children's social behavior in peer groups through naturalistic observation (Bridges, 1931, Isaacs, 1935, Murphy, 1939) and learning theory analysis (Wahler,

1967, Kahn, 1966, Hartup, 1964, Hartup and Coates, 1967, Hartup and Glazer, 1967, Charlesworth and Hartup, 1967, Stith, 1962, and Handlon and Gross, 1959). The major finding in the learning theory analyses is that the behavior of the child is subject to the reinforcement control of other children. Some of the major variables which constitute reinforcement are attention, initiating activity, status, dominant behavior, giving affection acceptance and tokens, and submissiveness. For a complete review of learning theory analyses of children's social behavior, the reader is referred to Stevenson (1964).

Summary

Several issues have been discussed. The need for more manpower in the mental health profession has resulted in several attempts to use untrained and partially trained personnel in various roles. Concomitantly, there has been increased concern with focusing therapeutic, interventive and preventive practices on young children, implicitly calling for some determination of what behaviors constitute effective responses to children in interaction with them, and of what behaviors constitute effective psychosocial functioning in children. With respect to research in mental health intervention strategies, studies have suffered most from a lack of appropriate control groups.

The present investigation attempts to provide information about the issues discussed above. Specifically, the present study investigates the training of college undergraduates in specific skills related to playroom interaction with children and the impact of training on certain behaviors in the children with whom the undergraduates interact. Using a "training control group" of students and children who interact together under similar conditions but without exposure to the training con-

dition, the efficacy of training can be more effectively evaluated. Also, the employment of children's outcome measures in two different settings may provide more information about the validity of the findings.

Hypotheses

1a. Undergraduates being trained to become more skilled in their interactions with children will demonstrate significantly greater increments in effective responses to children than undergraduates who are not trained to become more skilled in their interactions with children. Responses considered effective are: Reflection of verbal content, Reflection of feelings, Reflection of motor activity, Interpretation, Reciprocal participation in fantasy behavior, Clarification of compliance, Giving help, Praise behavior, Affection, Warmth, Setting limits with explanation, Orienting, Statement of own emotion and Genuineness.

1b. Undergraduates being trained to become more skilled in their interactions with children will demonstrate significantly greater decrements in ineffective responses to children than undergraduates who are not trained to become more skilled in their interactions with children. Responses considered ineffective are: Criticism, Asking questions, Rejection, Direction, Setting limits without explanation, Initiating fantasy behavior, Unclarified compliance, and Nonattention.

2a. Children who experience an intensive relationship with a trained undergraduate will demonstrate significantly greater decrements in responses considered contraindicative of effective psychosocial functioning than will children who experience a relationship with

an untrained undergraduate. Contraindicative responses are: Non attention, Non recognition, Direction, Change involvement, Excitement, and Dominant participation.

3. The development of effective psychosocial behaviors in children who interact with trained undergraduates is generalizable to their interactions with other children. That is, those children who interact with trained undergraduates will demonstrate greater increments in effective psychosocial responses in interactions with other children than will children who interact with untrained undergraduates. Effective psychosocial responses in the group setting are measured by verbal comprehension behaviors, adequate coping measures, and interpersonally facilitating behaviors (Appendix G).

CHAPTER TWO

METHOD

Undergraduate subjects

Through an advertisement in the college newspaper, undergraduates were solicited to participate in a year course entitled "Sensitivity to Children". From the group of approximately fifty respondents, nine[1] students were selected (on the basis of being able to meet at the same time) to undergo the year long training procedures described below. The experimental group of nine students consisted of five males and four females. All were either juniors or sophomores. They had no specific major or academic interest in common other than their desire to learn about children.

These undergraduates were instructed to find one child in the local community, of their own sex, with whom they would be able to engage in weekly play sessions in a standard playroom on campus, for the entire year. It was further stipulated that the child must be between the ages of four and seven, and that undergraduates should not have had any previous contact with the child whom they select. Contracts with children were established using an introductory letter to parents (Appendix A). Parents were assured that they would be allowed

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[1] Ten were originally selected, but one subject dropped out of school.

to observe any or all of their child's play sessions. In addition, verbal agreements were made between the child and the undergraduate. Therefore, at least for the first play session, all children were willing to attend.

A control group of nine undergraduates was randomly selected from the same pool of respondents described above. Using the identical letter and identical instructions, these students likewise found one child between the ages of four and seven with whom they would engage in weekly play sessions. The difference between the control and experimental undergraduates was that the control group of students did not undergo the training procedures described below. These control students were informed that, as a result of random selection, they could, if they so desired, be part of an "independent study" group. The only requirement made of them would be their weekly play sessions for the entire year, and weekly reports based on those sessions. Reading lists (Appendix C) were distributed, but no assignments were made. Essentially these control students were told that they would be given the opportunity to experience a relationship with one child for the academic year, and that what they learned from their relationship, readings, thoughts, etc., was entirely of their own choice and pursuit. No classes would be held until the end of the academic year, at which time students would be able to air their views, experiences, questions, etc. Originally, twenty students were informed of their opportunity to participate. Of those twenty, fourteen volunteered, and nine were included in the experimental design (five males and four females).

The present study therefore consisted of two groups of nine undergraduates, each containing five males and four females. The exper-

imental group ("trainees") was exposed to training in play techniques with children, while the control group received no such training. The nine control students simply played with their children once a week.

Child Subjects

The eighteen children selected by the undergraduates formed the experimental and control groups of children. Each group of nine children consisted of five boys and four girls, ranging in ages from four to seven years. Exact ages of each child are given in Table 1 (Appendix B). All children came from white middle class homes. Two children of each group (one boy and one girl) came from homes where the father was absent as a result of divorce. One girl in each group did not attend any kind of school, while the rest of the children attended either nursery, kindergarten or first grade. All could have been considered "normal" in the sense that none had manifested any overt signs of maladjustment, and none had been referred to any mental health facility. All children had at least one sibling, with the exception of one girl in the experimental group.

The Training Procedure

During the academic year, the experimental group of undergraduates engaged in continuous training in specific techniques of playing and talking with children. Techniques were based on a client centered model of play therapy (Axline, 1949, Ginott, 1966). Initially, training took the form of didactic lectures and specific instructions (Appendix D). During the first half of the academic year, all students in the experimental group were observed by the author in live interaction with their child. Comments and discussions immediately followed each observation. Emphasis was placed on helping the undergraduate

approach the model of behavior required of him. At the same time, anxieties about performing adequately were responded to with nondirective and noncritical remarks. As the students became more comfortable with the specific techniques, emphasis shifted in individual supervision to an understanding of the child's behavior.

Concomitant to the individual supervision provided by the author, group supervision was led by Dr. Gary E. Stollak. Classes met two hours weekly, during which video tapes were played of the student's interaction with his child. The student's behavior was discussed by both Dr. Stollak and the members of the class. In addition, readings were periodically discussed (Appendix C).

An attempt was made to help the undergraduate understand both his own behavior and the behavior of the child. Theoretical issues and more phenomenological issues were both discussed in relation to understanding behavior. As with individual supervision, group supervision evolved from an initial didactic approach towards a concentration on understanding the relationship between student and child.

The Measurement of Student-child Behavior

The entire training program consisted of 20 play sessions spread over six months. All play sessions were spaced one week apart, except that as a result of term breaks, five weeks elapsed between the 7th and 8th session, and two weeks elapsed between the 15th and 16th session. Four sessions, the 1st, 7th, 13th and 20th were recorded on video tape, and the behaviors emitted were coded and systematically analyzed. With the exception of the 1st session, each of the video taped sessions represented the final play session of the term and the latter three sessions occurred 10-12 weeks apart. The four video taped sessions

occurred in a special playroom, one ordinarily not used for the play sessions. The room was, however, equipped with the identical toys used in the regular play sessions, including such standard play equipment as a bobo doll, puppets, ring toss, musical instruments, knives, guns, dolls, doll houses, kitchen ware, and crayons with paper.

The Measurement of Child Behavior in Group Interaction

Three times during the course of the study each child was asked to come in on a Saturday morning to play in the special playroom for fifteen minutes with two other children, who were also of the study. These three sessions of children playing in groups occurred at the outset of the study (subsequent to the 1st session) near the middle (subsequent to the 13th session) and at the end (subsequent to the 20th session). The sessions were video taped for analysis. Procedures for designation of specific children were such that no child found himself playing with the same child on more than one occasion. Presumably, none of the children were acquainted with each other prior to the beginning of the study. No attempt was made to match sex or age in the individual triads. Prior to each session, children were introduced to each other by a special assistant. The three children were informed that they would be in the playroom with each other for 15 minutes.

The Coding of Student Behavior

The aim of the training procedures described was to help the undergraduate develop skills in effectively responding to children. The major emphasis was on the communication of understanding of the child in an atmosphere of permissive acceptance, and on the utilization of effective controls when necessary. Drawing largely from the literature on client centered play therapy, research in parent-child relationships,

and the objective behavior categories developed by Moustakas, Sigel, and Schalock (1956), specific behavior categories were devised to assess the responses of the student. These categories have already been mentioned in a previous section (p. 19). The specific categories, including definitions are presented in Appendix E.

The Coding of Child Behavior (Student Interaction)

An important question to which this study addressed itself was the influence of interaction with a trained undergraduate on the behavior of the child. Effective psychosocial functioning in the child was discussed in terms of several general areas of behavior: (1) verbalizations reflecting an awareness and comprehension of the feelings, thoughts and behavior of the self and other, (2) effective (coping) responses to situations, activities and internal feelings, and (3) responses associated with a rewarding interaction with another person. Specific behavior categories were derived from these areas of interest and enumerated in a previous section (p. 22). These behavior categories were used to assess behavioral changes in the children. Definitions of the categories are presented in Appendix F.

The Coding of Child Behavior (Group Interaction)

The fifteen minute triadic play sessions were coded in terms of the same areas of interest discussed above. However, only three general behavior categories were used: (1) verbal comprehension skills, (2) Effective coping skills, and (3) Interpersonal skills. Each of these categories was viewed as a continuous variable. Ratings from one (low) to five (high) were made every five minutes for each category. Definitions and behaviors associated with each rating are presented in Appendix G.

The Procedure for Coding Behavior Categories

For both the undergraduate behavior categories and the children's behavior categories (with the undergraduate), the 20 minute play sessions were divided into one minute intervals. During each minute interval, more than one category could be scored for, but each category could be scored only once. Thus for a given undergraduate or child behavior category, scores could range from 0-20 for each play session coded. As mentioned, the behavior categories used in children's group interaction were coded from 1-5 every five minutes during the fifteen minute triadic play sessions.

Training Assistants in the Coding Procedure

Two assistants coded each play session for undergraduate behavior and two other assistants coded the same play sessions for children's behavior. All four assistants coded for the children's group interaction. Rater's means for each category were used in the data analysis.

Unaware of the hypotheses of this study, the four assistants (trained separately) were initially lectured about the categories to be scored. Discussions followed, definitions were revised and made more clear, and the assistants then committed the categories and definitions to memory. Following this, approximately ten hours were spent viewing video tapes, during which time the assistants tried to recognize as many of the categories as they could. When it was felt that the assistants had become competent to code, ten video taped sessions were coded by the author and each assistant. The author, acting as "expert" calculated percentage of agreement scores between himself and each assistant. The agreement scores for each category are presented in Appendices E and F. For the undergraduate categories,

percentage of agreement with the expert ranged from .65 to .99, with a mean agreement score of .81. For children's categories, percentage of agreement ranged from .55 to .87, with a mean of .70.[1] Agreement scores were considerably lower for the children's categories due to the frequent difficulty of hearing the child.

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[1] No percentage of agreement scores were obtained for categories of children's behavior in group interaction. Approximately two hours of lecturing the four assistants preceded their coding of the group interaction.

CHAPTER THREE

RESULTS

The design of the present study involved two training conditions (training vs. no training) sampled at four time periods (sessions 1, 7, 13, and 20), and included the analysis of child and student dependent variables.[1] Each dependent measure received a score from 0-20 during each play session--indicating the frequency of occurrence by minute interval over a twenty minute play session. Because of the likelihood of initial individual differences, difference scores were used. These scores represented differences from the frequencies obtained in the first session, which were used in this study as a standard base rate.[2]

Statistical Procedure

The procedure for statistical analysis of the dependent variables initially involved Pearson product moment intercorelations of all dependent measures. An analysis of variance (2x3 with repeated measure on the latter factor, Winer, 1962) was then performed for each variable--

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1 Dependent variables of children's behavior in group interaction are discussed separately (p. 55).

2 An alternative method for obtaining base rates would be an analysis of covariance. However, no computer program was available for this design.

yielding F ratios for the main effect of training, for the main effect of time, and for the effects of interaction between the two. The degrees of freedom associated with the F ratio for the training effect and its appropriate error term were 1 and 16; those associated with the main effect of time were 2 and 32, and those associated with the interactional effect and its appropriate error term were 2 and 32. For variables with significant interaction effects, simple effects tests were performed. Variables with significant time main effects were subjected to the Neuman Keuls test of paired comparisons of mean differences.[1]

In this chapter, selected intercorrelations of child, student, and child-student dependent variables are first presented, indicating a clustering of behaviors within both child and student dependent measures. On the basis of these clusters, the results of the analyses of variance are examined, with specific attention paid to the main effects of training, the main effects of time, and where significant interactions occurred, to the simple effects of these two conditions. While only partial data are presented in this section, the data from all intercorrelations and all analyses of variance are presented in the Appendices (H, I, J).

Of the original 39 behavior categories (17 child and 22 student) 3 child and 5 student behaviors occurred so infrequently during the play sessions that they were excluded from the statistical analyses: Affection, Statement of personal feelings in the context of reality, Statement of personal feelings in the context of fantasy (child behaviors), and Setting limits with explanation, Setting limits without explanation,

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[1] The analysis of variance with repeated measures design assumes equivalence of relevant dimensions between measures. While the number of sessions occurring between the coded sessions was not always equal, the number of weeks between coded sessions was equal.

Statement of own emotion, Reflection of feelings, and Compliance unclarified (student behaviors). Each of these categories had total sums of less than 11 when summed over the 7th, 13th and 20th play sessions. In addition, the original scores for these categories in the first session had total sums of less than 10. The remaining 31 dependent measures—whose frequencies were great enough to allow for meaningful statistical analysis to be performed--are the subject of this section.

Intercorrelations

Table 2 presents intercorrelations of a number of child dependent variables, selected on the basis of inspection of all intercorrelations. Intercorrelations are based on the raw scores of the latter three sessions (7th, 13th, and 20th) summed across both groups. All variables which were not presented were judged irrelevant in terms of their lack of significance and/or their unrelatedness to the patterns of intercorrelations found.

Inspection of this table reveals that four fantasy variables, Statement of personal thought or behavior in the context of fantasy, Statement of interpersonal awareness in the context of fantasy, Fantasy aggression, and Fantasy behavior are all significantly intercorrelated. Secondly, three behaviors which appear to be manifestations of social distance—Nonrecognition, Nonattention, and Dominant participation—are all significantly correlated with each other. Thirdly, three behaviors involving concrete reality--Statement of personal thought or behavior in the context of reality, Object mastery, and Excitement—are all significantly intercorrelated. Lastly, the category Reality aggression correlates significantly and positively with three of the four fantasy behaviors, moderately positively with the three social

distance behaviors, and significantly and negatively with two of the three concrete reality behaviors.

A suggestion of clustering is supported by the fact that all of the fantasy behaviors (Statement of personal thoughts, or behavior, Statements of interpersonal awareness, Fantasy behavior, and Fantasy aggression, herein referred to as "Cluster 1") correlate negatively (with two exceptions all correlations are significant) with all of the concrete reality behaviors-- Statement of personal thoughts or behavior in the context of reality, Excitement, and Object mastery-- herein referred to as "Cluster 3", and only moderately positively with the social distance behaviors-- Nonrecognition, Nonattention and Dominant participation, i.e., now called "Cluster 2", in turn, demonstrates consistently negative correlations with Cluster 3 behaviors although significance occurs only for the category, "Statement of personal thought or behavior in the context of reality" with all three Cluster 3 behaviors, and for the association between Dominant participation and Excitement (r=.49). The category Reality aggression correlates significantly with all Cluster 1 behaviors, excluding Statement of personal thought or behavior in the context of fantasy.

Table 3 presents intercorrelations of selected student variables. The existence of two clusters of student behavior is readily apparent. Specifically, the categories, Reflection of verbal content, Reflection of motor behavior, Interpretation, Compliance clarified, Warmth, and Reciprocal participation in fantasy are all positively and significantly intercorrelated. These behaviors will henceforth be referred to as "Cluster A". Secondly, the categories Asking question, Nonattention,

Table 2.

Intercorrelations of Selected Child Dependent Variables

	2	3	4	5	6	7	8	9	10	11
1. State. personal thought/behavior (F)[a]	.76**	.48*	.84**	.23	-.20	.03	-.20	-.22	-.41	-.51*
2. State. interpersonal awareness (F) ..		.68**	.95**	.50*	.15	.25	.37	-.37	-.60**	-.60**
3. Fantasy aggression.			.73**	.88**	.38	.33	.46	-.74**	-.44	-.68**
4. Fantasy behavior...				.50*	.22	.08	.42	-.48*	-.62**	-.72**
5. Reality aggression.					.35	.38	.34	-.66**	-.29	-.72**
6. Nonrecognition.....						.74**	.47*	-.64**	-.31	-.34
7. Nonattention.....							.47*	-.62**	-.39	-.29
8. Dominant participation.....								-.68**	-.49*	-.22
9. State. personal thought/behavior (R)[b]									.47*	.47*
10. Excitement.....										.50*
11. Object mastery.....										

*p<.05 [a](F)= in the context of fantasy

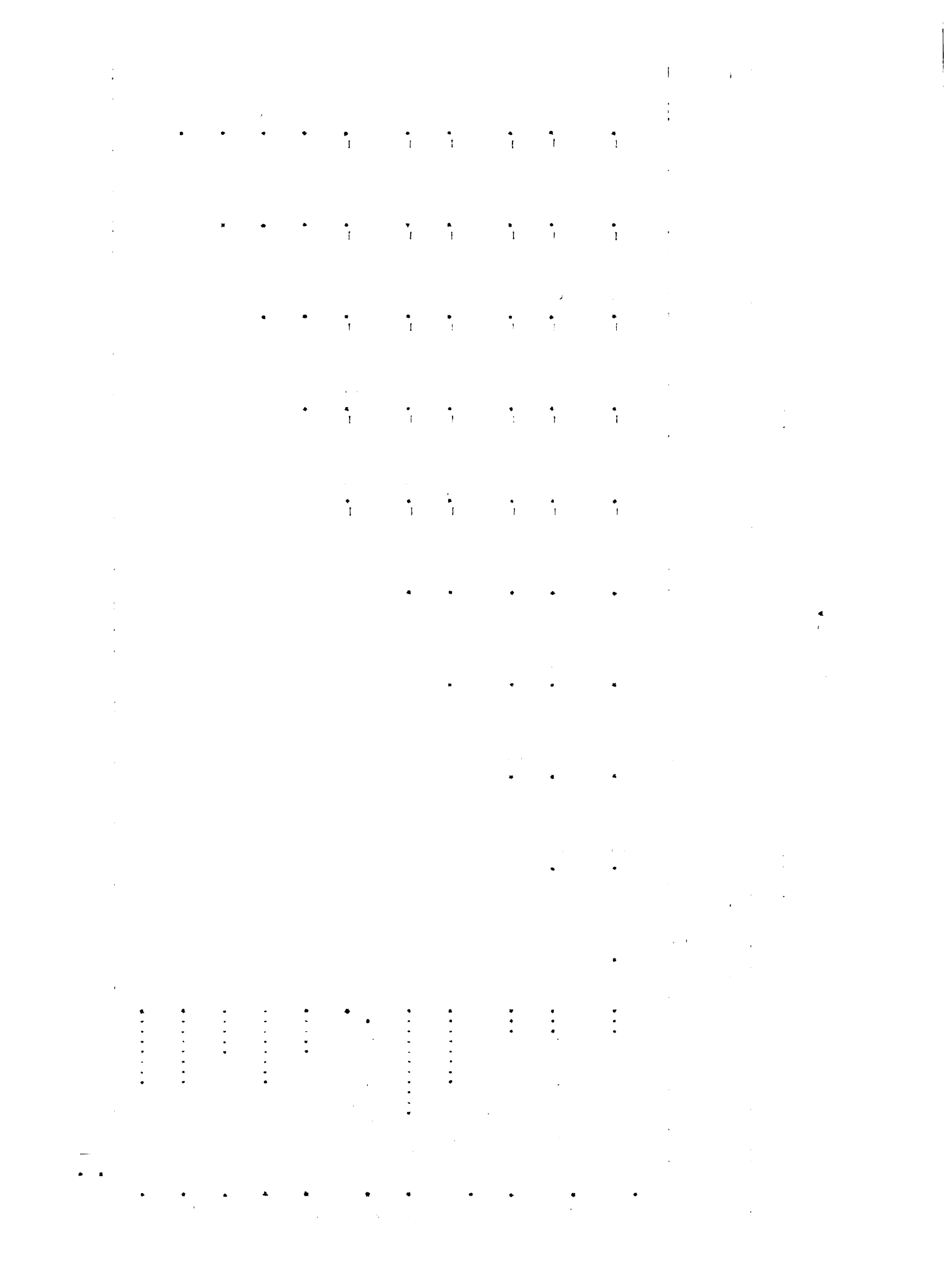
**p<.01 [b](R)= in the context of reality

Table 3.

Intercorrelations of Selected Student Dependent Variables

	13	14	15	16	17	18	19	20	21	22
12. Reflection of verbal content...	.84**	.73**	.76**	.53*	.84**	-.61**	-.58**	-.81**	-.50*	-.69**
13. Reflection of motor behavior...		.81**	.63**	.51*	.80**	-.76**	-.54*	-.82**	-.48*	-.63**
14. Interpretation...			.63**	.49*	.71**	-.78**	-.55*	-.79**	-.53*	-.76**
15. Compliance clarified.....				.45*	.68**	-.39	-.31	-.56*	-.30	-.47*
16. Warmth.....					.50*	-.25	-.60**	-.78**	-.54*	-.52*
17. Reciprocal part. in fantasy behav.						-.63**	-.41	-.77**	-.39	-.67**
18. Ask question.....							.46*	.66**	.62*	.76**
19. Rejection.....								.66**	.77**	.63**
20. Nonattention.....									.58*	.70**
21. Criticism.....										.79**
22. Direction.....										

*p<.05
**p<.01



Criticism, Rejection, and Direction are all positively and significantly intercorrelated. They represent "Cluster B". Lastly, Cluster A behaviors correlate negatively, and in most cases significantly, with Cluster B behaviors.

Table 4 presents intercorrelations of those child dependent measures presented previously with those student measures just presented. The table indicates several relationships between the child and student clusters described: Cluster 1 (Statement of personal thought or behavior in the context of fantasy, Statement of interpersonal awareness in the context of fantasy, Fantasy aggression, Reality aggression and Fantasy behavior) and Cluster 2 (Nonrecognition, Nonattention, and Dominant participation) demonstrate consistently positive and frequently significant correlations with student Cluster A behaviors (Reflection of verbal content, Reflection of motor behavior, Interpretation, Compliance clarified, Warmth, and Reciprocal participation in fantasy behavior). Cluster 1 and Cluster 2 also demonstrate consistently negative and frequently significant correlations with Cluster B behaviors (Asking questions, Rejection, Nonattention, Criticism, and Direction). Children's Cluster 3 behaviors (Statement of personal thought or behavior in the context of reality, Excitement, and Object mastery) demonstrate the opposite relationships, i.e., consistently positive and frequently significant correlations with Cluster B behavior and consistently negative and frequently significant correlations with student Cluster A behavior.

Evidence for these relationships is weaker for some variables than for others. Within Cluster 1, the category Reality aggression shows least evidence of the association described; within Cluster 2,

Table 4.

Intercorrelations of Selected Child Variables with Selected Student Variables.

Student Variables	Child Variables: State. personal thought/behavior (F)[a]	State. Interpersonal awareness (F)	Fantasy aggression	Fantasy behavior	Reality Aggression
Reflection of verbal content...	.65**	.58*	.53*	.65**	.33
Reflection of motor behavior...	.49*	.59*	.71**	.69**	.52*
Interpretation...	.42	.47*	.45*	.58**	.27
Compliance clarified.....	.64**	.59**	.48*	.60**	.27
Warmth.....	.26	.10	.23	.34	.10
Reciprocal part. in fantasy behav.	.84**	.77**	.74**	.86**	.55*
Ask question.....	-.36	-.38	-.64**	-.52*	-.48*
Rejection.....	-.13	-.23	-.30	-.31	-.09
Nonattention.....	-.45*	-.44	-.54*	-.53*	-.36
Criticism.....	-.10	-.24	-.33	-.28	-.24
Direction.....	-.47*	-.52*	-.41	-.57*	-.23

*p<.05 [a](F)= Fantasy
**p<.01

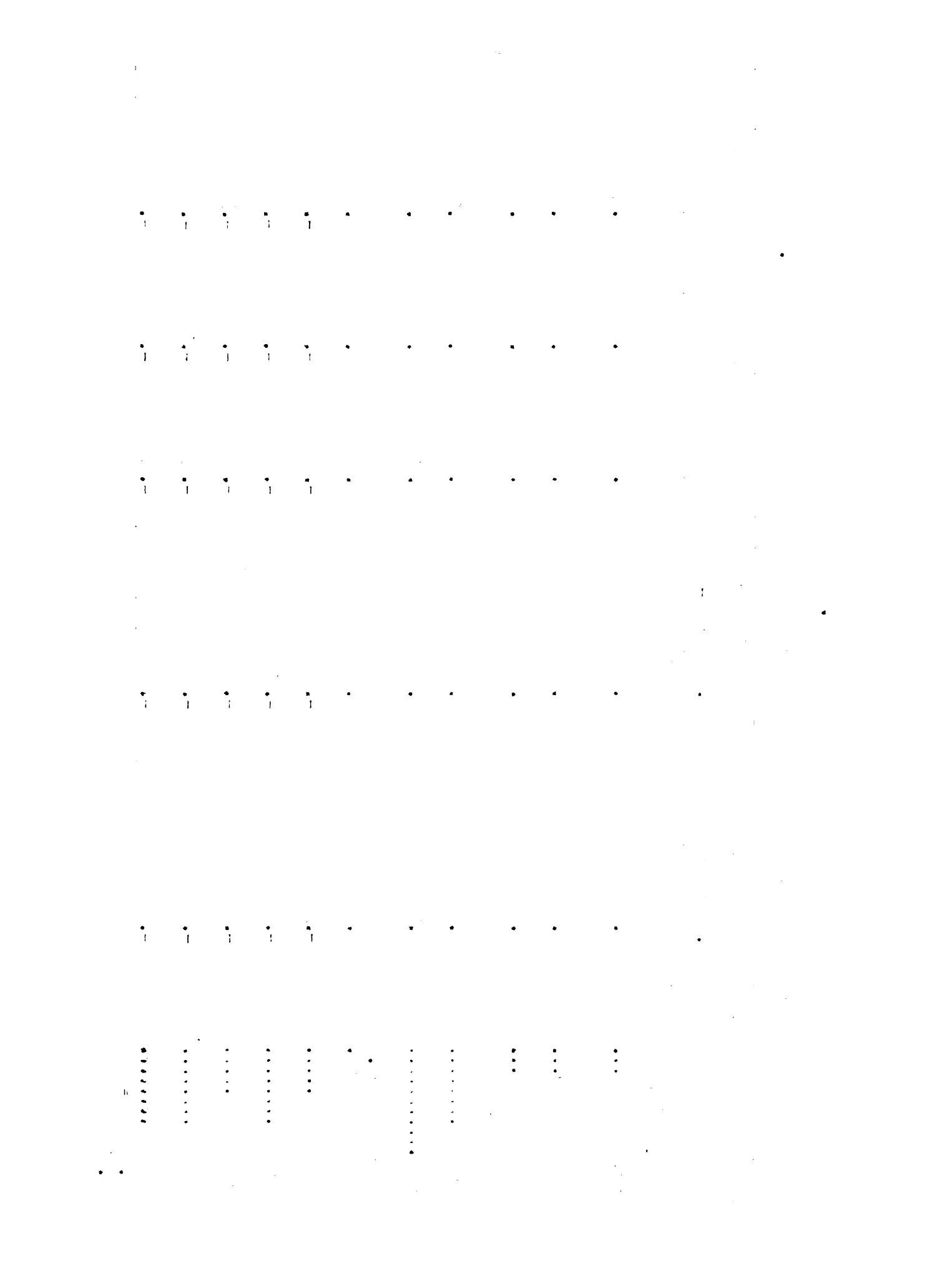


Table 4. (Cont'd.)

Student Variables	Child Variables: Non-recognition	Non-attention	Dominant participation	State. personal thought/behavior (R)[b]	Excitement	Object mastery
Reflection of verbal content...	.45*	.12	.61**	-.53*	-.40	-.29
Reflection of motor behavior...	.68**	.36	.63	-.73**	-.39	-.46*
Interpretation...	.59*	.45*	.50*	-.55*	-.36	-.27
Compliance clarified.....	.12	.15	.51*	-.49*	-.34	-.27
Warmth.....	.16	.05	.40	-.19	-.13	-.08
Reciprocal part. in fantasy behav.	.40	.15	.47*	-.58*	-.45*	-.53*
Ask question.....	-.59**	-.59**	-.52*	.37	.73**	.45*
Rejection.....	-.37	-.35	-.68**	.41	.16	.16
Nonattention.....	-.48*	-.18	-.59**	.55*	.16	.12
Criticism.....	-.32	-.47*	-.52*	.48*	.04	.02
Direction.....	-.49*	-.42	-.64**	.54*	.44	.27

*p<.05
**p<.01
[b](R)= Reality

Nonattention demonstrates weaker correlations than the other Cluster 2 behaviors, and within Cluster 3, the category Excitement demonstrates weaker correlations than the other two behaviors. Likewise, within student Cluster A and student Cluster B, the categories Warmth and Rejection demonstrate less strong and less frequently significant correlations than do many of the other variables. Unlike the other dependent measures, these two categories (as well as the category Genuineness) were rated from 1-3 during each play session.

Analyses of Variance

Main effects of training-Cluster 1.

Table 5 presents the overall mean difference scores of Cluster 1 variables. Scores are based on the average of difference scores obtained in the 7th, 13th, and 20th play session compared to the 1st session.

Overall mean difference scores demonstrate significant main effects for four of the five variables in Cluster 1. Only the category Reality aggression yielded no significant training difference. The table indicates that experimental children engaged overall significantly more Statements of personal thoughts or behavior in the context of fantasy, Statements of interpersonal awareness in the context of fantasy, Fantasy aggression, and Fantasy behavior in general.

Simple effects of training-Cluster 1.

Since with the exception of the categories Fantasy aggression and Reality agression, these Cluster 1 variables also yielded a significant interaction in the analysis of variance, simple effects

Table 5.

Overall Mean Difference Scores of Cluster 1 Variables.

Variable	Group[c]	Overall Mean Difference	F
State. personal thought/behavior (F)	T	3.29	19.45**
	C	0.44	
State. interpersonal awareness (F)	T	3.66	6.49*
	C	-0.07	
Fantasy aggression	T	3.40	6.78*
	C	0.18	
Fantasy behavior	T	4.81	13.13**
	C	-1.18	
Reality aggression	T	3.88	1.32
	C	2.18	

*p<.05
**p<.01
[c]T-Training condition
C-Control condition
(F)=Fantasy

tests were performed. Results indicated that in the final play session, the simple effect of training was significant for all three variables. Table 6 presents mean difference scores of the 20th play session for each variable. Clearly, in the final session, the experimental children emitted more statements of personal thoughts of behavior and of interpersonal awareness, both in the context of fantasy, and engaged in significantly more fantasy behavior in general, than did the control group. Thus the greater overall mean differences in the experimental group are attributable mainly to the final session. However, the simple effects test also indicated that for the category Fantasy behavior, the simple effect of training in the 7th session was also significant ($F=4.41$, $p < .05$). In addition, the simple effects

Table 6.

Mean Differences in the 20th Session
(Cluster 1 Variables with Significant Interactions).

Variable	Group[c]	Mean Difference	F
State. personal thought/behavior (F)	T	8.88	14.33**
	C	1.33	
State. interpersonal awareness (F)	T	6.00	12.76**
	C	-0.88	
Fantasy behavior	T	7.88	21.50**
	C	-1.88	

*p<.05
**p<.01
[c]T-Training condition
C-Control condition

of training for the category Fantasy behavior approached significance in the 13th session (F=3.58, p .07).

Simple effects of time-Cluster 1.

While there was no significant time main effect for any of the Cluster 1 variables, the presence of a significant interaction warranted an analysis of the simple effects of time. Results indicated that for all three variables, the simple effect of time was significant within the experimental group and nonsignificant within the control group: Statement of personal thought or behavior in the context of fantasy (F=3.71, p .05), Statement of interpersonal awareness in fantasy (F=4.77, p .05), and Fantasy behavior (F=5.69, p .01).

Table 7 presents comparisons of mean differences within the experimental group for the three Cluster 1 variables with significant

Table 7.

Comparison of Means Over Time Within Experimental Group for Three Cluster 1 Variables with significant Simple Time Effect.

Variable	Session Differences		
	7-13	7-20	13-20
State. personal thought/behavior (F)[a]	-0.55	-6.33**	-6.88**
State. interpersonal awareness (F)	-2.67	-4.44**	-2.77*
Fantasy behavior	-1.00	-5.11**	-4.11**

*p<.05
**p<.01

[a](F)=Fantasy

simple effects of time, using the Neuman-Keuls method. The comparisons clearly indicate that in the final session the experimental children made significantly more statements of personal thought or behavior in the context of fantasy, statements of interpersonal awareness in fantasy, and engaged in significantly more fantasy behavior in general. The significant differences occur for all three variables when comparing their mean differences in the final session with differences in either of the other two sessions.

The significant interaction, then, for each of the three Cluster 1 variables, is a function of the final play session, when the experimental children's fantasy behaviors showed significant increases, both with respect to time and with respect to training. That is, when comparing the experimental group's fantasy behaviors in the final session either with their frequencies in previous sessions, or

with the control group's frequencies in the final session, significant differences are found.

Main effects of training-Cluster 2.

Table 8 presents overall mean difference scores of Cluster 2 variables. The table indicates that only one of these variables, Nonrecognition, demonstrated a significant training difference. The variable, Nonattention approached a significant training difference (p .071). The variable, Dominant participation did not yield any significant training difference, although differences were found in the same direction as were found with the other two variables. Thus, in terms of Cluster 2 behaviors, results indicate that the experimental children engaged overall in significantly more Nonrecognition

Table 8.

Overall Mean Difference Scores of Cluster 2 Variables.

Variable	Group[c]	Overall Mean Difference	F
Nonrecognition	T	7.70	11.96*
	C	1.62	
Nonattention	T	4.70	3.72
	C	1.44	
Dominant participation	T	4.11	2.35
	C	1.62	

*$p < .01$

[c]T=Training condition
C=Control condition

behaviors than did the control group, and they tended also to engage in more Nonattention behavior than did the controls, although this difference was not significant. With respect to the main effects of

time for Cluster 2 variables, no significant differences were found in the analyses of variance.

Main effects of training-Cluster 3.

Table 9 presents overall mean difference scores for all Cluster 3 variables. The table indicates that only one variable, Excitement, demonstrated a significant training effect. Unlike the previous variables with training differences, Excitement behavior was significantly greater in the control group. While the mean differences in Object mastery are as great as for the category Excitement, the high degree of random error in the former seems to account for the lack of significance.

Table 9.

Overall Mean Difference Scores for Cluster 3 Variables.

Variable	Group[c]	Overall Mean Difference	F
State. personal thought/behavior (R)	T	-0.74	1.48
	C	1.18	
Excitement	T	0.00	5.41*
	C	2.40	
Object mastery	T	1.11	0.50
	C	3.55	

*p<.01 [c]T=Training condition C=Control condition (R)=Reality

Main effects of time-Cluster 3.

The analysis of variance indicated that for the variables Object mastery and Statement of personal thoughts or behavior in the context of reality, time had a differential effect on the frequencies of these

behaviors when combining training and control groups of children. Table 10 presents the results of paired comparison analyses of mean differences between time levels for Cluster 3 variables with significant time main effects.

Table 10.

Paired Comparisons of Mean Differences Between Time Levels For Variables with Significant Time Main Effects.

Variable	Session Differences		
	7-13	7-20	13-20
State. personal thought/behavior (R)[b]	-0.33	-3.03*	-1.66
Object mastery	-2.38	-5.48**	-3.11*

*p<.05
**p<.01
[b](R)=Reality

The table suggests that when compared to the 7th session all children as a group engaged in significantly more Statements of personal thoughts and behavior in the context of reality, and in significantly more Object mastery behaviors in the final session. Also, when compared to frequencies in the 13th session, all children engaged in significantly more Object mastery behaviors in the final session.

Main effects of training-Cluster A.

Table 11 presents overall mean difference scores of those student variables associated with Cluster A. With the exception of the Warmth variable, all variables demonstrated significant training effects. In each case the trainee students engaged overall in significantly greater frequencies, i.e., of Reflection of verbal content,

Table 11.

Overall Mean Difference Scores of Cluster A Variables.

Variable	Group[c]	Overall Mean Difference	F
Reflection of verbal content	T	7.70	37.43**
	C	0.29	
Reflection of motor behavior	T	11.44	8.89**
	C	2.55	
Interpretation	T	8.85	8.74**
	C	0.11	
Compliance clarified	T	1.44	1.51*
	C	-0.07	
Reciprocal part. in fantasy behav.	T	5.51	7.25**
	C	-1.74	
Warmth	T	0.48	0.12
	C	-0.48	

*p<.05
**p<.01
[c]T=Training condition
C=Control condition

Reflection of motor behavior, Interpretation, Compliance clarified, and Reciprocal participation in fantasy behavior.

Simple effects of training-Cluster A.

The category Warmth demonstrated a significant interaction effect in the analysis of variance. The simple effects test indicated that for the 13th and 20th sessions, but not for the 7th, the experimental students demonstrated significantly greater degress of Warmth than did the control students (13th session F=4.41, p .05, 20th session, F=4.18, p .05).

Simple effects of time-Cluster A.

None of the behaviors associated with Cluster A demonstrated

any significant time main effect. However, due to the presence of a significant interaction effect, the categories Warmth and Interpretation were analysed for the simple effects of time. Results indicated that within the training condition, the simple effects of time were significant for both variables (Warmth-F=7.66, p .01, Interpretation-F=14.89, p .01). Neuman Keuls test for paired comparisons of mean differences between sessions indicated that the trainee students were rated significantly greater in Warmth during the 13th and 20th sessions, when comparing either session to the 7th session. Also, the trainees engaged in more Interpretations in the 7th and 13th sessions, when comparing either to the frequency in the 20th session.

Main effects of training-Cluster B.

Table 12 presents overall mean difference scores of those student variables associated with Cluster B. The table indicates that all of the behaviors demonstrated overall significant training differences. In each instance the trainees overall engage in significantly less Questioning, Rejecting, Nonattentive, Critical, and Directive behaviors.

Simple effects of training-Cluster B.

Only one of the behaviors associated with Cluster B demonstrated any significant interaction effect--Ask question. Analysis of simple effects of training indicated that there was no significant difference between groups in the final play session, but that Control students asked more amounts of questions in both the 7th and the 13th play session. Differences were so large in these sessions that a significant main effect occurred.

Table 12.

Overall Mean Difference Scores for Cluster B. Variables

Variable	Group[c]	Overall Mean Difference	F
Ask question	T	-7.62	12.36*
	C	-1.77	
Rejection	T	-0.62	12.85*
	C	1.22	
Nonattention	T	-7.14	8.80*
	C	0.70	
Criticism	T	-1.40	23.43*
	C	1.85	
Direction	T	-7.22	36.87*
	C	1.59	

*p<.01

[c]T=Training condition
C=Control condition

Simple effects of time-Cluster B.

Analysis of the simple effects of time further indictated that within the trainee group, there was a significant increase in the frequency of questioning behavior in the final session, when comparing the frequency in that session with either the 7th or the 13th session.

Other Significant Differences

In addition to the behavior categories described above, the following student variables also yielded significant differences in the analyses of variance: Give help, Initiating participation in fantasy behavior, and Genuineness. The first two behaviors yielded significant time main effects, while the latter demonstrated a significant interaction (F=5.72, p .01). The simple effects test of training

differences revealed no significant differences. However, the simple effects of time within the experimental group were significant ($F=4.17$, $p < .05$) and further analysis (Neuman Keuls) indicated that the trainee's rating of Genuineness was significantly greater in the 13th ($p < .05$) and 20th ($p < .05$) sessions when comparing either to the 7th session.

No other student or child behaviors yielded any significant differences in the analyses of variance. Results of all analyses are presented in Appendices I and J.

Children's Behavior in Group Interaction

Table 13 presents overall mean difference scores of the children's

Table 13.

Overall Mean Difference Scores of Children's Behavior In Group Interaction

Variable	Group[c]	Overall Mean Difference	F
Verbal comprehension skill	T	1.39	0.78
	C	1.95	
Coping skill	T	2.94	0.10
	C	2.33	
Interpersonal skill	T	1.05	1.06
	C	1.33	

[c]T=Training condition
C=Control condition

behavior in group interaction in the second and third group sessions. Three dependent measures were used: (1) verbal comprehension skills, (2) coping skills, and (3) interpersonal skills. The variables were

rated from 1-5 three times during the fifteen minute sessions. The table indicates that no significant differences occurred for any of the variables.

CHAPTER FOUR

DISCUSSION

Overview

This study developed out of a concern with the feasibility of training college students in techniques presumed effective in interaction with young children. The study concerned itself with the behavior changes of college students as a result of training. It also focused on the changes in the children with whom the students trained. The implication in focusing on behavior changes in the young children was that if positive personal and social behavior became manifest in children exposed to trained non professionals, then one and perhaps two avenues for lowering the incidence of mental illness may become evident. That is, training and educating college students in mental health skills may provide them with the ability and responsibility for positively affecting the personal and social growth of young children, both in the student's capacity as parents and/or teachers, and perhaps even in the capacity of a sub-professional functioning as mental health workers.

In studying the development of skills in the undergraduate, certain behaviors were considered relevant variables of interest. These behaviors were extrapolated largely from client-centered theories of play therapy and from selected research studies in parent child relations. Similarly, in studying the development of effective functioning in young

children, certain other behaviors were considered relevant variables of interest. These behaviors were derived primarily from a conception of mental health developed by Bessell and Palomares (1968). In this study, the major empirical concern was with the relationship between student and child behaviors.

The present study also attempted to develop and execute two methodological procedures which were thought to be helpful in gaining greater insight into the process and outcome of the student-child relationship: the use of a "training control group", and the use of an extra-milieu outcome measure.

The results of the study provide information about the specific hypotheses tested and regarding several broader issues. The discussion begins with some methodological problems which were encountered in the process of the investigation. Secondly, the changes in the student's behavior are discussed. Next, there is an examination of changes in children's behavior will be made, and subsequently the relationship between student and child differences will be discussed. Finally, general implications of the findings are discussed, with specific attention paid to the training and education of college students, child development, and further research in these areas.

Methodological considerations

One of the assumptions of this study was that an evaluation of the effects of training students on the personal and social growth of young children should contain outcome measures which occur outside the setting in which change is assumed to occur. To that end, each of the children of this study was placed three times during the year with two other children, also participating in the study, in an unstructured group

situation. Contrary to original predictions, no significant differences occurred between groups in any of the behaviors measured. Therefore, the differences which occurred in the student-child interaction must necessarily be evaluated cautiously, since there is no empirical indication that these differences (or any others) were also manifest outside the playroom. The question of whether behavior change did not actually occur outside the playroom, or whether one or the other outcome measure was invalid in ultimately unanswerable. The use of more effective behavioral indices in both milieus would probably have provided greater information about the effects of training. Perhaps an alternative to the triadic group situation could have been an evaluation of the child's behavior in his home or at school, since these milieus encompass a greater part of the child's life.

It was apparent that the triadic group situation was an inadequate outcome measure for some very specific reasons. One of the most important reasons was that it appears as if children of these ages do not like to interact with children of the opposite sex. This reason alone could account for some of the absence of verbalizations of almost all of the children during the first group session.

Secondly, it appears as if it is improbable that any child between the ages of four and seven would proceed to make the personal acquaintance of an unfamiliar child as one might expect an adult to do. This might be especially true when considering the fact that the children may have been aware that a t elevision camera was recording everything they said and did. During the first group session, all children "froze". While their inactivity provided an ideal base rate for future sessions, the following session was similar to the first. Most children were

extremely anxious, disliked coming on a Saturday morning, and disliked being asked to play with a strange set of children instead of their regular student. In the final session, children demonstrated different behaviors. Since many children were angry and uncomfortable in the group, several attempted to destroy some of the equipment. Others began fighting, causing the session to be cut short. Lastly, on three occasions one child failed to appear for the group interaction, necessitating a dyadic interaction which violated the standardized situation. The three dyadic interactions resulted in intimate conversations between the children. This suggests that dyadic interactions might have been a more effective outcome measure.

In general, for the reasons described above, the use of the triadic unstructured group situation as a viable, valid and discriminatory outcome measure proved to be a mistake. An evaluation of the behavioral differences which occurred within the student-child interaction must therefore take into account the nonsignificant differences in the group situation, especially if the differences are to be interpreted in terms of increased personal and social development of the children.

A second methodological issue concerns validity. The four sessions which were video taped for statistical analysis were not necessarily representative of the other 16 play sessions. The possibility that the use of video tape equipment influenced the obtained results remains an issue of speculation. Both the author and the students felt that the children were minimally aware of the camera during their interactions with the students. The students, however, appeared to be maximally aware of the cameras. The trainees in particular were under considerable pressure to act appropriately. All students appeared anxious

about their appearance on a television camera. Whether the student's anxiety influenced the results in any way is also indeterminable. Ideally, random statistical comparisons of student and child behavior in each of the two settings (camera room and regular playroom) should have been performed.

Student Behavior Differences

One of the original hypotheses was that undergraduates trained in specific skills in interaction with children would demonstrate greater increments in certain presumably effective behaviors than undergraduates who received no training. Since the efficacy of any behavior is ultimately judged in terms of its proven influence on other behaviors, the apriori assumptions about effective behaviors were made with caution.

Results indicated that several behaviors occurred overall more frequently with trainees and several others were emitted overall more frequently by control students. All of the differences occurred in the predicted directions. Specifically, the trainees demonstrated overall greater frequencies in the following behaviors: Reflection of verbal content, Reflection of motor behavior, Interpretation, Compliance clarified, and Reciprocal participation of fantasy behavior. The trainees also were rated significantly higher in Warmth than the controls in the final two sessions (13 and 20). Control students demonstrated overall greater frequencies of Asking questions, Rejection, Direction, Criticism, and Nonattention.

Intercorrelations indicated a high degree of interrelatedness among both the behaviors significantly associated with the trainee group and the behaviors significantly associated with the controls: in all

instances, these intercorrelations were significant within each cluster. Negative and frequently significant correlations were found between those behaviors associated with trainees and those associated with controls.

Permissiveness vs. Restrictiveness

The clusters of behaviors associated with the two training conditions appear to reflect a difference in stylistic approach in interaction with children. Specifically, the behaviors emitted more frequently by the trainees could be viewed in terms of permissive behaviors. The behaviors emitted more frequently by the control students might be viewed in terms of restrictive behaviors.

A permissive-restrictive dimension is defined by Becker (1964) as:

> ...The degree of control exerted (or not exerted) over the child...but the manner in which control is achieved can vary considerably...(p. 197)

Elsewhere Becker (1964) states:

> The restrictive vs. permissive dimension is defined at the restrictive end by: many restrictions and strict enforcement of demands in the areas of sex play, modesty behaviors, table manners, toilet training, neatness, orderliness, use of household furniture, noise, obedience, aggression to siblings, aggression to peers, and aggression to parents (p. 189).

Ginott (1966) gives a definition of permissiveness which is also relevant to the discussion:

> The essence of permissiveness is the acceptance of children as persons who have a constitutional right to have all kinds of feelings and wishes. The freedom to wish is absolute and unrestricted, all feelings and fantasies, all thoughts and wishes, all dreams and desires, regardless of content are accepted, respected, and may be permitted expression through appropriate symbolic means...permitted symbolic outlets are painting "mean" pictures, throwing darts at targets, sawing wood, boxing life-size Bobo, recording ill wishes on tape, composing caustic poems, writing murder mysteries, etc. In short, permissiveness is the acceptance of imaginary and symbolic behavior...(p. 110).

Becker's conception of the permissive-restrictive dimension is

based on a series of factor analytic studies (Becker et. al., 1959, 1962) in which he identified two orthogonal dimensions--permissiveness vs. restrictiveness and warmth vs. hostility--and which could be used to describe differential child rearing practices, (Becker, 1964). Ginott's definition is not empirically based. The two, however, appear complementary to each other.

The present study makes use of the permissive-restrictive dimensions without intending to imply anything further than a conceptual similarity between the definitions presented above and the significant behaviors found. Justification for the use of the terms is therefore based sheerly on an examination of the significant categories, and their consistency with the terms as defined above.

The significant behaviors associated with the trainee group--Reflection of motor behavior, Interpretation, Compliance clarified, Reciprocal participation in fantasy, and Warmth--do not appear to reflect an attempt of the undergraduate to exert any kind of control over the child. Secondly, all of the behaviors appear to accept the stimulations of the child. It was mentioned previously that reflective behavior is often associated with an attempt to understand the child, and in the present study it is likely that these reflective behaviors had the same function. Finally, it appears as if many of the student's responses to the child were conveyed in an atmosphere of positive feeling. This last generalization is based on the significance of the Warmth variable in sessions 13 and 20.

Those behaviors emitted significantly more frequently by the control students appear related to the concept of restrictiveness as discussed above. Nonattention, Criticism, Direction, Asking questions, and Reject-

ion all appear to be behaviors which attempt to exert control over the child's behavior. Some of the behaviors suggest that control was exerted in an atmosphere of negative feeling (Rejection and Criticism).

One behavioral example from this study may elucidate the concepts used to describe student differences. Consider two instances in which the child is engaged in a fairly typical behavior: punching the bobo doll with an accompanying verbalization such as "I'm punching him in the nose, I'm going to make him bleed; we need a referree". Responses such as "You're really going to punch him one" (reflection of verbal content) "Pow" (Reflection of motor behavior) "I've brought the referree you asked for" (Reciprocal participation in fantasy, Compliance clarified) and "You really like to feel strong and big", (Interpretation) all essentially accept the child's behavior, respond to his expressed request, and do not attempt to exert any control over his actions. In addition, these responses can be conveyed with varying degrees of positive feeling. Warmth appeared to be significantly associated with these permissive responses.

Consider the same behavior and the following student responses: looking out the window at passing people (Nonattention) "That isn't a very nice thing to do" (Criticism), "What do you want a referree for?" (Asking questions), and "Don't start that stuff again" (Direction). All these behaviors attempt to exert control over the child's behavior and do not appear to accept his stimulations without conditions. Since these behaviors were significantly associated with the global rating of Rejection, it is likely that restrictive responses were often conveyed with accompanying negative feelings.

The development in the trainee group of what might be considered

permissive behaviors can readily be seen as a result of the training procedures. Essentially all of the significant behaviors were ones emphasized in the training procedures (Appendix D). The significance of the simple effects of time and training for the Warmth variable suggests that beyond being able to assume a specific new behavior repetoire, the trainees were able to convey positive feelings towards their children. The simple effects tests suggest, in fact, that the trainees developed (increased) their amount of Warmth over time, and that by the 13th session they were significantly more Warm than the control students and than they themselves had previously been.

To the extent that the permissive behaviors can be assumed to be effective in facilitating the effective functioning of the children, the original hypothesis which concerned student training differences was to a large degree confirmed. Unexpectedly, the control students demonstrated significant increments (Table 12) in presumably ineffective responses to children. Is one to assume this increment to be characteristic of the average college student as he forms a relationship with a child? This issue will be discussed in a later section.

Child Behavior Differences

One of the original hypotheses was that children who experienced a relationship with a trained undergraduate would demonstrate significantly greater increments in behaviors presumably associated with effective psychosocial functioning than would children who interacted with an untrained undergraduate. Results indicated that experimental children demonstrated overall significantly greater increments in the following categories: Statement of personal thought or behavior in the context of fantasy, Statement of interpersonal awareness in the context of fantasy,

Fantasy aggression, Fantasy behavior, and Nonrecognition. Control children emitted overall significantly greater frequencies of Excitement behavior. With the exception of the Nonrecognition category, all significant differences occurred in the predicted direction.

Patterns of intercorrelations suggested three clusters among child behavior variables: Fantasy behavior (Statement of personal thoughts or behavior in fantasy, Statement of interpersonal awareness in fantasy, Fantasy aggression, and Fantasy behavior) Reality behavior (Excitement, Object mastery and Statement of personal thought or behavior in reality) and Social Distance behavior (Nonrecognition, Nonattention, and Dominant participation). The category Reality aggression was significantly correlated with three of the four fantasy variables, however, since no significant effects of training occurred for the category, it will not be included in a discussion of the other behaviors with which it clustered.

Fantasy Behavior

In this study, fantasy behavior was defined following Markey's (1935) definition: "the use of objects, materials, activities, and situations as though they had properties or attributes other than those which they apparently or actually seemed to possess" (p. 10). In the present investigation, fantasy behavior was conceived of as one possible effective coping response.

With respect to fantasy behavior, the findings of this study are consistent with clinical descriptions of children's use of fantasy in play. Erikson (1940, 1963) provides detailed clinical vignettes to demonstrate the problem solving aspects of fantasy play. For example, he describes his contacts with a four year old hospitalized boy whose

completely bandaged head was soon to be uncovered. Erikson describes how the boy used a roll of adhesive tape in fantasy play to anticipate the removal of his bandages.

> Suddenly he said (picking up the roll of adhesive tape) "Let's pretend this is a leg and it's sore". He attempted to unwind the roll of adhesive tape but found he could not separate the layers... "We need a giant for that". I pretended to phone the nurse to send up a giant, then left the room and reappeared as the giant...The patient arranged the play object (tape) in such a way that he expressed in sign magic his active mastery over the situation victimizing him at the time (Erikson, 1940, p. 581).

While the above description deals with the use of fantasy in the anticipation of problems, Erikson also gives many examples of the "curative" aspects of fantasy play. A distinction is made between "play disruption" and "play satiation". In the former, the child's play becomes increasingly associated with and symbolic of his conflicts until anxiety becomes so overwhelming that the play must stop. In "play satiation", the child is capable of mastering his anxieties to the point where has has been able to "play the conflict out". Play satiation thus occurs as a result resolution through the medium of play.

> If play is successful, i.e., if it is not disrupted from within or interrupted from without, it has an effect comparable to a few hours of good, long needed sleep--"everything looks different". I do not doubt that it is this autotherapeutic function of play that we are restoring in many cases by creating for the child regular and undisturbed periods of play, no matter how we rationalize what is happening during such a "cure".(Erikson, 1940, p. 627).

Thus, in contrast to the frequent emphasis on the "relationship" in child therapy, Erikson believes that it is the child's symbolic manipulation of toys which is essentially involved in the resolution of conflict.

Klein's (1948) "Technique of play analysis" also emphasizes the child's symbolic expression of fantasies, wishes, and actual experiences

through imaginative play. She compares play behavior with primary process material in dreams, and suggests that children's cures occur through the successful interpretation of the conflict which is symbolically expressed in the child's play. Klein gives many descriptions of children's fantasy behavior. For example:

> In the case of Erna, a six year old obsessional patient, the impressions she had received from her training in cleanliness had had a lot to do with her neurosis, and in analysis she brought them before my eyes in the greatest detail. For instance, she sat a small doll down on a brick and made it defecate in front of a row of other admiring dolls. She then repeated the same theme, but this time we had to play the parts ourselves. I had to be a baby which was dirtying itself and she was the mother. She admired and petted the baby for what it had done. Then she became angry and suddenly played the part of a governess who was ill-treating the child (Klein, 1948, p. 32).

Two comprehensive reviews of the literature on some aspects of fantasy have both reached equivocal conclusions about the nature of children's fantasy behavior. Levin and Wardell (1962) discuss conclusions pertaining to findings in doll play research. They distinguish between a "replication" and "wish-fulfillment" model of children's doll play:

> The basic question that has influenced the understanding of doll play is whether the child is telling about events and hopes and plans which are available to him in his day to day world or whether his acts in this setting are otherwise unattainable. ...One way of thinking about doll play behavior is that it gives the child an opportunity to express his current experiences and preoccupations. The correspondence between real life and fantasy need not be uninteresting for research purposes (p. 51).

Klinger (1969) has reviewed the total literature on imaginative behavior and attempts to relate fantasy behavior (defined as ideation) to what is known about play behavior (associated with motor behavior). Klinger concludes that play behavior (similar to what is considered here as fantasy behavior) serves an important problem solving function in child-

hood. Klinger differentiates between areas of problem solving in which imaginative play can serve a mastery function: (1) problems of instrumental learning, "posed by the existence of an unattained, desired, fairly specific goal", (2) problems of emotional integration, "requiring the mastery of emotionally overwhelming experiences and of emotionally disturbing anticipated events" and (3) problems of experiential continuity, "in which the child must come to grips with new situations, not necessarily of great emotional potency" (p. 292).

In summary, fantasy behavior has in the past been found to be associated with the process of achieving ego mastery, i.e., the successful coping with internal conflicts, anticipated events, and with the "cultivation of new cognitive, verbal, and motoric skills" (Klinger, 1969, p. 293).

Content Analysis of Children's Fantasy Behavior

Table 14 represents a post hoc analysis of the thematic content of children's fantasy behavior as it occurred in this study. The fantasy themes were recorded subsequent to the completion of the study. Only the fantasy content of children who received total fantasy scores of six or greater were listed, i.e., only fantasy behavior which occurred over at least six of the twenty minute play session is considered.

An analysis of the fantasy content might suggest a crude differentation in terms of levels of fantasy behavior, i.e., more simple, stereotyped responses, less complex responses representing a low level fantasy. For example, in Table 14 "C makes man out of clay, puts man in house" (Session 1, Group T, Child G) or "C and S use animals to create a zoo" (Session 3, Group C, Child b). The more complex, nonsterotyped behaviors may be thought of as a high level fantasy, e.g., in Table 14,

"C role plays mother; S role plays father, supper experience played out" (Session 2, Group T, Child E), or "C beats up big man (bobo doll) for depriving him of candy; C then gives halloween candy in apology to big man" (Session 2, Group T, Child I). The "higher levels" of fantasy may involve more complex behaviors such as adult role behaviors, affective expression, interpersonal awareness, and the symbolic expression of conflict. The lower levels of fantasy may involve cognitive and motor behavior which remains closely associated with the objects and activities involved, and involve relatively little mastery striving.

Gondor (1964) suggests that fantasy behavior can be differentiated in terms of degree of reference, i.e., from inanimate to animate objects.

> We were able to see that they (fantasies) led from a preoccupation with inanimate objects over to animals and then to human beings and are thus indicative of stages of ego functioning... (p. 382).

In this study, fantasy behavior might also be differentiated in terms of reference to objects, e.g., (Session 1, Group T, Child I), animals, e.g., (Session 1, Group T, Child B), the self, e.g., (Session 3, Group T, Child G), or others, e.g., (Session 4, Group T, Child C).

If one examines Table 14 irrespective of the differing frequencies of fantasy behavior between groups, it seems that the thematic content of the experimental group generally involved "higher levels" of behavior and more often contained references to intrapersonal and interpersonal situations. To be sure, this is a general statement, based on assumptions which have just been developed. However, there appears to be a "clinical richness" of fantasy behavior in the experimental

Table 14.

Content of children's fantasy behavior.

Session	Group	Child	Major Content
1	T	B	Aggression against animals using hand puppets.
1	T	D	Animals embark on train ride to circus; circus portrayed.
1	T	G	C makes a man out of clay; describes man and puts him in house.
1	T	I	C plays cars and trucks; creates garage and makes car wheels from clay.
1	C	C	C portrays car accident and calls repairman on phone.
1	C	D	Development of house theme-C inserts various food, furniture and cleaning objects in house.
1	C	E	Development of house theme-C inserts food, furniture and dolls in house, elaborates functions.
1	C	F	C elaborates role aspects of various puppets e.g., "This is the father".
2	T	D	C describes personal accomplishments: capturing a chimp, killing a whale; fighting an alligator, saving someone.
2	T	B	C role plays angry mother, asks S to role play naughty girl; C prohibits S in visiting Santa.
2	T	A	C shoots every animal in playroom; each animal falls dead.
2	T	E	C role plays mother; S role plays father; supper experience played out.
2	T	F	C talks with S over phone, acquaintance made; thoughts and behaviors discussed.
2	I	I	C beats up big man (bobo doll) for depriving him of candy; C then gives halloween candy to big man in apology.

Table 14 (Cont'd.).

Content of children's fantasy behavior.

Session	Group	Child	Major Content
2	C	B	Physical aggression at student using hand puppets.
2	C	D	C and S pretend to have brand new house; C and S set up house and live in it.
2	C	E	C and S play sisters; go shopping together to get food for grandma.
3	T	A	C aggresses physically against S using hand puppets.
3	T	B	C role plays mother, S plays child. C and S go hunting in jungle for bears.
3	T	D	C plays doctor; S plays child with bad heart. C gives S painful shots and discusses inevitability of pain.
3	T	G	C puts on comedy show for camera; C portrays himself as strongest man on earth.
3	T	F	C role plays mother and cowboy; engages in aggression against S.
3	T	H	C and S engage in doll play; discuss roles and functions of dolls.
3	T	I	C role plays policeman; arrests S for speeding.
3	C	B	C and S use animals to create a zoo.
3	C	D	C and S use hand puppets; discuss feelings of like and dislike about various real people.
3	C	I	C physically aggresses against S using hand puppets.
4	T	A	C aggresses against animals and puppets using hand puppets.
4	T	B	C has S cut body parts from C; C role plays mother; S plays naughty girl; C kills S and marries policeman.

Table 14 (Cont'd.).

Content of children's fantasy behavior.

Session	Group	Child	Major content
4	T	C	C role plays mother; S plays child; C cooks dinner for S.
4	T	D	C role plays doctor; S plays child with bad heart; S gets painful shots.
4	T	F	C and S discuss personal attributes of puppets.
4	T	G	Mortification of all objects, animals and people in the world; bury them with a bulldozer; resurrection.
4	T	H	C and S discuss feelings thoughts and behavior of puppets.
4	T	I	S's car breaks C's car and C's car goes to hospital for 7 weeks.
4	C	E	C and S discuss functions and roles of food, furniture and people in doll house.
4	C	F	C and S set up doll house and discuss functional aspects of people and objects.

group which is not apparent in the control's fantasies.

Clinically, the experimental children's fantasies appeared frequently to involve problems of emotional integration and concerns with identification and role behavior. Problems of emotional integration are exemplified by experimental Child A, whose fantasy behavior continually involved aggression and who progressively found its more appropriate expression; experimental child B, whose role reversal fantasies appeared to be an attempt to resolve issues dealing with a punitive mother who had deprived her of a relationship with her father. In reality, the child's parents were divorced and she never saw her father; experimental Child D, whose doctor fantasies appeared to reflect his immediate concern with his recovery from rheumatic fever (in reality he was still required to have weekly injections); and experimental Child I, whose fantasies dealt with aggression to and from an adult. According to his undergraduate partner, the child was having conflicts with his father and was frequently physically punished.

Secondly, concerns with identification and adult role behavior seemed to be exemplified by the many instances of role play fantasies in which the children either engaged in role reversals, e.g., "You be the father and I'll be the mother" or had the student adopt the adult role behavior, e.g., as in telephone conversations.

While it is not implied that these two concerns--problems of emotional integration and concerns with identification--were not evident in the behavior of the control children, it is notable that of the 13 instances of fantasy behavior in the control group, only 4 appeared to reflect these issues (3 times with Child E and 1 time

with Child D).

The experimental children's overall significantly greater increments in Statement of personal thought or behavior in fantasy, Statement of interpersonal awareness in fantasy and Fantasy aggression appear to be associated with the thematic content of the fantasies. That is, in expressing problems of emotional integration and concerns with identification through fantasy, the children made frequent references to themselves and other people, and expressed a great deal of affect through aggressive behavior.

Thus, with respect to the content of children's fantasies, on the basis of post hoc analysis, the findings are consistent with previous clinical assumptions. That is, the expression of intrapersonal and interpersonal concerns through the vehicle of fantasy reflects a process of achieving ego mastery. Overall, the experimental children demonstrated significantly greater increments in the expression of fantasy.

Fantasy Aggression

Part of the overall training differences in fantasy behavior was attributed to differences in Fantasy aggression. Levin and Wardell (1962) discuss the myriad of variables which have been associated with fantasy aggression in doll play research:

> Because of the theoretical dispositions of the early investigators, the most frequently measured variables were derived from behavior theory and were indices of acquired drives in children. Hence, more than any other behavior, fantasy aggression has been measured by this technique and it was the happy confluence of theory and method that this particular behavior is frequently elicited in doll play. (p. 28).

Most globally, it seems plausible to attribute the high incid-

ence of fantasy aggression in the experimental children to the process of achieving ego mastery discussed above. Specifically, the expression of aggression in fantasy may be related to the problems of emotional integration which were referred to above.

There have, however, been studies which have manipulated antecedent conditions and investigated the effects on fantasy aggression. A discussion of this area of research is included in the discussion of the relationship between student and child differences, presented below.

Most of the behaviors categorized as Fantasy aggression involved gross motor activity, e.g., throwing things, punching the bobo, and shooting dart guns at imagined people. Considering Fantasy aggression as one form of gross motor activity and the category Excitement as another, it might be suggested that the two groups of children differed in this dimension. It may be that Excitement, e.g., giggling, screaming, squirming reflected an unorganized expression of affect, whereas the gross motor forms of aggression reflected a greater degree of organized affective responses. Again, this issue is open to speculation. Clearly, however, the control children showed overall significantly greater increments in Excitement behavior, whereas the experimental children were engaged in overall significantly more Fantasy aggression.

Social Distance Behavior

Results suggest that some of the interpersonal behaviors of the children differed between groups. The experimental children demonstrated overall significantly greater increments in Nonrecognition than the controls. The category Nonattention approached the .05

level of significance in the same direction as Nonrecognition and the two categories were significantly correlated.

Thus it appears as if interaction with trained undergraduates tended to increase the amount of unresponsive behaviors in the experimental children, which is contrary to original predictions. These results are similar to the findings of Moustakas, Sigel, and Schalock (1956). In an analysis of therapist child interaction, they found one of the most frequent responses to reflective behavior was Nonrecognition. Thus, although Nonrecognition and Nonattention behaviors were conceived of as contraindicative of positive funtioning in children, they may be typical responses to frequent reflective stimulation. Also, since these behaviors were significantly correlated with all fantasy behaviors, it may be that the experimental children became so invested in intrapsychic processes that their responsiveness to the undergraduate decreased. This will be discussed in further detail in the following section.

The Relationship Between Student and Child Behavior Differences

The results of the present study are consistent with some of the findings in the area of doll play research. Several studies have attempted to manipulate levels of experimenter interaction and determine the effects on various behaviors, especially aggressive and nonstereotyped behavior.

Pintler (1945) manipulated the quality of experimenter interaction and measured the frequencies of several behaviors, including aggression, over two half hour sessions. Two conditions of experimenter interaction--"high levels" and "low levels" were implemented. High levels consisted of frequent attention to and interest in the child's

play. Low levels consisted of a minimal amount of interaction with the child. Pintler found that high levels of interaction were associated with increased fantasy aggression. While the distinction between the high and low levels of interaction are not necessarily similar to the permissive-restrictive dichotomy used in this study, the Pintler study demonstrated the importance of adult behavior in a play session in determining the amount of fantasy aggressive behavior of the child.

Siegel (1957) indirectly investigated the effects of permissiveness on aggressive behavior in a doll play setting. In this study it was observed that aggression decreased from session to session in the absence of an adult.

> The evidence of this study...suggests that the presence of a permissive adult may have a cumulatively facilitating or release effect on children's aggression (p. 378).

In a more sophisticated design, Siegel and Kohn (1959) replicated these findings. They compared an adult present condition with an adult absent condition over two sessions and found a significant increase in the adult present condition and a significant decrease in the adult absent condition. Children in this study were aged 4-7, i.e., identical to the ages of children in the present study.

The implication of their findings is that "adult permissiveness must be conceived in more positive terms than simply reducing S's fear of punishment". The authors suggest that in the permissive condition, the child "could get a flow of support from the existence of an accepting authority figure and the perception of rules and regulations consonant with their behavior" (Siegel and Kohn, 1959, p. 139). Their findings suggest that permissiveness constitutes a

facilitating condition.

The distinction between sterotyped and nonstereotyped behavior in doll play is similar to the distinction between fantasy and reality made in this study (p.24). In a study described above, Pintler (1945) found high levels of experimenter interaction to be associated with increased nonstereotyped behavior. Bach (1945), Phillips (1945) and Yarrow (1948) found that the amount of stereotypy decreases from session to session. Holoway's (1949) study of 3-5 year olds in therapy indicated that at the end of therapy children play more realistically using less fantasy behaviors. Levin and Wardell (1962) suggest that "the relaxation of restraints in the second session (of doll play) which yields more aggression may also lead to more nonstereotyped and nonaggressive behaviors (p. 45)". In Becker's (1964) general review of the permissive-restrictive dimension of parental behavior, mention is made of the findings in doll play research:

> ...the experimental research on the effects of permissiveness (indicates)...when a child's behavior is measured over a series of experimental sessions under warm permissive interaction conditions, a general increase in a variety of response patterns is found. Such results are consistent with the common sense notion that permissiveness serves as a generalized reinforcer for a wide range of responses, just as restrictive attitudes appear to have a generalized inhibitory effect (p. 198).

The studies from which the above generalization comes (Sears, 1951, Yarrow, 1948, Hollenberg and Sperry, 1951) all used a small number of sessions and relatively undefined experimenter behavior (all studies used Pintler's "high level of interaction").

The findings of the present study offer support to Becker's conclusion on the basis of somewhat different methodology, i.e., a greater number of play sessions and more clearly defined behavior

variables. The association between permissive adult behaviors in a playroom setting and the expression of fantasy behavior in general (and fantasy aggression in particular) is reiterated in the current findings. In addition, the facilitating nature of adult permissiveness appears to be suggested by the theoretical association between fantasy behaviors and the ego's problem solving process. Ginott's definition of permissiveness as "the acceptance of imaginary and symbolic behavior" (p. 62) is strikingly relevant to the findings of this study.

Explanations for the associations between permissiveness and fantasy are based on speculation. In a review of the motivational aspects of play, Klinger (1969) suggests that fantasy can be viewed as a response associated with the absence of "compelling external stimulation". The effect of this absence may be a decrease in the arousal level of the individual, and fantasy may be a response aimed at reinstating an optimal level of arousal. The results of the present study are not in conflict with this notion. Specifically, the permissive-restrictive dichotomy, i.e., the different degrees of exerting control over the child, may be seen as consisting of different degrees of "compelling external stimulation". Children's fantasy behavior may in turn be viewed as a response to the relative absence of such stimulation. Singer (1966) explains fantasy as "a shift of attention away from an ongoing physical or mental task or from a perceptual response to external stimulation towards a response to some internal stimulus" (p. 3). The experimental children with a permissive undergraduate essentially may have become more responsive to their own needs and internal states than the needs and behaviors

of the adult. The control children may never have been able to make such a shift on account of the restrictive demands made upon them.

The shift of attention away from sources of external stimulation may have occurred as a result of a change in perception about the permission for determining one's own actions. Specifically, the child whose stimulations are received by the adult with acceptance may begin to perceive himself as having a wide range of latitude in behaviors which he chooses to emit. It would seem logical therefore that he would choose those behaviors which would be most gratifying in the sense of satisfying drives or wishes. He also may choose to engage in symbolic behavior aimed at the elimination of anxiety. In a restrictive atmosphere the child may quickly perceive his behaviors as eligiting a wide range of approval and disapproval responses in the student. Given the narrower range of responses approved by the student, the chances of the child emitting personally meaningful and gratifying behaviors might be less. One of the restrictions which the control students placed on their children may have been in the areas of fantasy and aggressive behavior, a phenomenon which does not appear to be too surprising.

The implication is however, that the permissive behavior of the trainee student facilitated in the child behaviors which were personally meaningful and relevant to an attempt to increase their effective psychosocial functioning. Furthermore, it may be that the trainee students engaged their children in an educative process, perhaps changing the child's perception of the locus of control of behavior from initially being vested in with the student to eventually occurring with the child.

The shift from attention to compelling sources of external stimulation to internal processes may also account for the differences in children's social behaviors. That is, a decrease in concern with external demands may be associated with an increase in nonresponsiveness to other stimulations such as reflections and interpretations.

Implications for Training and Education

A major issue to which this study indirectly addressed itself was the manpower shortage in the mental health field. Suggested solutions to the problem have been described. A major proposal is that nonprofessionals be used in psychiatric, one to one interview situations. Another emphasis has been on the "in service training" of those people who come in contact with children, e.g., parents, teachers, police, and nurses.

In this study, the training of college undergraduates in mental health skills represented an attempt to assess the feasibility of increasing the effectiveness in living of large segments of thepopulation through an educational approach. That is, if college students could develop skills in interaction with young children, then they may be able to contribute to the increased effectiveness of children with whom they come in contact either as parents, teachers, or in some other position of responsibility.

The results of this study indicated that some behavior changes took place in children. However, because of the inadequate extramilieu outcome measure these changes could not be clearly evaluated. Therefore, it is almost impossible to make any definitive statement about the success of the training procedures, or the quality of change

that took place in the experimental children.

The results do, however, suggest that college student's exposure to a relatively small amount of information about, and training in, mental health principles, resulted in an alteration of their behavior patterns with young children to such an extent that the behavior of the children with whom they interacted also demonstrated some form of positive change within the training situation. This single fact, while not overwhelming, supports the notion of training college undergraduates in techniques of interaction with young children as a possible partial solution to the manpower shortage. Perhaps even more, the training of college students represents a preventive strategy in the alleviation of mental health problems.

The use of the training control group has added some worthwhile insights into the behavior of the college student who interacts with children over a period of time. The results reveal a large amount of critical, nonattentive, rejecting, and controlling behaviors to be typical of the untrained college student. In group discussions which followed the 20th play session, the control students were asked to assess their own competence with their children. Several related how important they had become to their child, "acting as a father to him" or "really helping with his life", or "she liked playing with me better than nursery school, so her parents took her out of school".. None of the students had read all of the recommended readings. In fact, few had read any. All of the controls students felt that they had learned a great deal from their experience, and most felt they had had a positive influence on the child.

Paradoxically, and contrary to what the control group generally thought of their interactions, many of the behaviors which they displayed (even under video tape observation) were at least inappropriate, if not more destructive. While the few examples which follow cannot support the generalizations made, they give some indication of what naturally might occur between adult and child, given no education intervention:

Child: I'm going to call my mother and tell her I want to kill my father (picking up phone).

Student: (Sits on chair, reading, ignores comment).

Child: I'm going to call my mother and tell her I'm going to kill my father (speaking louder).

Student: What's your phone number?

Child: (Hangs up phone).

or:

Child: Let's go shopping. You be the mother and I'll be the father. O.K. Dear, I'll get the bags.

Student: "Dear?" Are you kidding me Billy, cut it out.

or:

Child: (Comes in, punches bobo doll) He's down and out and up for another one. I'm going to knock him out.

Student: Calm down, you're crazy.

A final incident is suggestive of the inappropriateness, yet naturalness, of the control student's behavior. The student and his child were engaged in throwing a ball at each other for several minutes. The child began to throw harder, which in turn led the student to throw with greater force. This in turn caused the child to lose control of himself, first throwing the ball with all his might and then throwing other objects in the room, e.g., bowling pins, dolls, furniture, etc. The student's response was to become equally attacking and angry. He himself began throwing ob-

jects at the child with considerable force. Twenty minutes of outright hostile aggression then ensued. The aggression-counteraggression responses are obvious, but how many parents, teachers and other adults act similarly every day?

Education in mental health principles is not the only issue. How does one educate college students, or the layman in general? How does one take into account the myriad of personality variables which will lead each individual to perceive and react to children differently? Carkhuff and Truax (1965), Linden and Stollak (1969), and Zax Cowen, and Laird (1967) have only begun to approach the issue. For example, Linden and Stollak found a combination of didactic and experiential procedures to be more effective than experiential procedures alone. The training procedures are not specified. Few studies have addressed themselves to the manner in which professionals or nonprofessionals in the mental health services can be most effectively supervised and/or trained.

One event which occurred in this study was that the trainees initially resented the didactic segment of their training. They were anxious about a set of rules to which they were expected to conform. By the middle of the year, however, some had incorporated the technique into their repertories and felt comfortable both intellectually and behaviorally with the techniques to which they had been exposed. Some trainees appeared to have difficulty, however, in "freeing up" from the "technique", i.e., in observing and understanding the interaction at the same time as attempting to act appropriately. For example:

Child: You be the father and I'll be the mother.

Student: You want to be the mother and you want me to be the father.

Child: Right, waht do you want, bacon or eggs?

Student: You're wondering if I want bacon or eggs.

Child: Right, what do you want, bacon or eggs?

Student: You're wondering if I want bacon or eggs.

Child: (waits one minute) Let's play hockey.

One critical question in the training of undergraduates or anyone who is to interact therapeutically with children, may be in determining the most effective balance between technique instruction and the development of a cognitive understanding of the child.

Implications for Child Development

Although the current study did not address itself directly to child development, it was necessary to delineate relevant variables in adult-child relationships which might be associated with effective functioning in children. Consistent with some previous findings, fantasy behavior was demonstrated to be associated with permissive behavior in the undergraduate, and to reflect an attempt by the child to resolve issues which concerned him in his daily life. The relationship between permissiveness and fantasy behavior is still not clear, nor is it a certainty that fantasy behaviors are indeed a desirable response in interaction with an adult. However, it is clear, as it has been for a long time, that children's use of symbols to express internal states is an important vehicle in attaining ego mastery. If the training control group is indeed reflective of the average person who interacts with children, then it may be that fantasy behavior is unfortunately too often supressed by adults.

Some questions which might be of interest given the findings of the current study are the following: One might determine the extent to which fantasy as expressed in a play setting is associated with replication or wish fulfillment. If fantasy is indeed effective in achieving ego mastery,

it might be implemented in various interactional strategies, e.g., psychotherapy, school settings, and family activities. The relationship between fantasy behavior and child rearing practices, cultural expectations, and family structure might be of interest. One might expect that in societies in which performance, achievement, and responsibility are stressed, i.e., in more restrictive environments, fantasy behavior would occur less often in children's activities. The relationship between psychopathology and children's expression of fantasy in an area of research in which very little is known.

One important issue concerning child development remains to be discussed. This concerns the rate of behavior change in children's personality development. That one could expect any form of visible change to occur in a child over a period of six months as a result of 20 interactions with a college student is indeed a tenuous assumption. What often occurs in clinical settings is that the child begins to demonstrate behavior change within the setting, while the transfer of these changes to other settings takes much longer. Also, as Erikson (1940) argues, change is always occurring in the young child's life.

> The child...is constantly changing under the influence of extratherapeutic factors. Therapeutic factors act at best as accelerators and inhibitors on a continum of maturational processes which...in their extra clinical manifestations... have never been properly studied or described. The intimate changes observed during a child's treatment therefore are too easily explained as a function of treatment (Erikson, 1949, p. 589).

Thus, a related question concerns the direction of change.

Both of these issues, i.e., rate and direction of change, are important variables to be considered in the use of extra-therapeutic outcome measures. In order to increase the likelihood of using a valid and

sensitive extra-milieu outcome measure, a greater understanding of what changes might be expected to occur within a specified period of time is needed. In this study, an immediate question is what kinds of changes might have been manifest in the children after a longer period of time, e.g., after one year of interaction with a trained college student, and the extent to which these changes would be apparent in different settings.

Implications for Future Research

Of the many unresolved issues which this study has touched upon, several appear relevant for further research. In considering the college student as a nonprofessional in the psychiatric field, an immediate researchable question involves using disturbed children, poor learners, withdrawn children, etc. rather than presumably normal youngsters. Stollak (1968) has studied the experimental effects of students treating children from a child guidance population, but no control group was used.

If, however, one's interest is not in the nonprofessional as a therapeutic agent, but more globally as an agent of change within the community, other issues become a focus of concern. One researchable question already mentioned involves the issue of training and/or education of college students in mental health skills. Comparisons of different techniques are greatly needed. The issue can be broadened to include other populations which come in contact with children, i.e., all child care agents. What are the ways in which these agents can be effectively influenced? From the point of view of research, the task appears to be to isolate out a small group of individuals (child care agents) and to effect an input of information and/or training which can then be assessed. Behavioral science programs in the elementary grades (Cooper and Seckler, 1967, Bessell and Palomares, 1968, and Ojemann, 1955) training college

students in mental health skills (Zax, Cowen and Laird, 1967, Linden and Stollak, 1969) and other strategies of intervention have been attempted. The findings however, are relatively small compared to the efforts involved. For the present study, it would be of interest to evaluate the trainees five, ten, or fifteen years later to determine whether the input of training had any demonstrable effect in their lives, e.g., as parents or teachers.

Regarding the children's behavior, other important areas of research have been mentioned, particularly in the areas of fantasy behavior and in the rate and direction of change of personal and social behavior. More empirical studies of fantasy behavior and its relation to other variables important to the child's growth are needed and may provide valuable information about the development of imagination, creativity, psychopathology, etc. A greater methodological comprehension of the rates and directions of behavior change in children would increase the validity and sensitivity of research which investigates behavior change in children.

On a more methodological level, the present study demonstrates the difficulty of developing adequate outcome measures. To be sure, the findings are less clear as a result. There are many alternatives to a triadic group situation to assess personal and social growth. The most relevant ones appear to be ones which asses behavior within settings in which the child spends a large part of his day, e.g., the school and the home. The best research designs may involve combinations of naturalistic observations and self report ratings of behavior. In such a combined method, both the self perceptions and the perceptions of others can be used to determine the nature of behavior change.

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APPENDICES

Appendix A.

MICHIGAN STATE UNIVERSITY . East Lansing . Michigan 48823

Department of Psychology . Olds Hall

Dear Parent:

The student who is presenting this letter to you is enrolled in a year-long course involving students learning how to play with children. We are hoping that parents like yourself will volunteer your child or children between the ages of four and seven to do nothing more than play with this student under my supervision for one-half hour once a week, during this academic year, in a fully equipped playroom in Olds Hall on the M.S.U. campus.

We will not be experimenting upon or manipulating your child in any way, and you and your spouse are invited to observe any or all the play sessions.

All of the above is necessary because it is very difficult to find children to help educate the undergraduate to become better parents and teachers in the future, so we sincerely hope for your cooperation and help.

I will be glad to answer any questions about this program. My office phone is 353-8877. If you and your child agree to help, the student will begin arranging a time convenient for you and your child, and will work out the transportation problem.

Thank you very much.

Sincerely yours,

Gary E. Stollak, Ph.D.
Assistant Professor

GES:mc

Appendix B.

Table 1

Ages of children in months

Trainee			Control		
Subject	Sex	Age	Subject	Sex	Age
1	F	48	1	F	55
2	F	62	2	F	72
3	F	72	3	F	72
4	F	74	4	F	84
5	M	52	5	M	59
6	M	54	6	M	66
7	M	59	7	M	75
8	M	77	8	M	83
9	M	90	9	M	87
		Mean 65.3			Mean: 72.6

Appendix C.

Sensitivity to Children

Reading List

1) Arnstein, Helene S. — What to tell your child about Birth, Illness, Death, Divorce and other Family Crises - Bobbs-Merrill, 1960

2) Axline, Virginia — Play Therapy - Houghton, Mifflin, 1947

3) Baruch, Dorothy W. — New Ways in Disciplines, New York, McGraw-Hill, 1949

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10) Gesell, A. & Ilg, F — Child Development, Harper, 1949

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18) MacFarlane, Jean W., Allen, Lualle, & Honzik, M. — A Developmental Study of the Behavior Problems of Normal Children - University of California Press, 1955

19) Moustakas, C.E. — Psychotherapy with Children, Harper & Row, 1959

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25) Spock, B. — Dr. Spock Talks about Problems of Parents, Crest (pb) 1962

26) Suehsdorf, Adie (Ed) — What to Tell Your Children About Sex, Pocket Books, 1959

27) Thomas, A., Chess, Stella & Birch, H. — Temperament & Behavior Disorders in Children, New York University Press, 1968

28) Verville, Elinor — Behavior Problems of Children, Saunders, 1967

29) Wolf, Anna — The Parent's Manual, Popular Library, 1951

Appendix D.

Basic Rules for Playing with Children

1. Reflect or clarify as many of the child's feelings as possible, be they verbally or non-verbally expressed.

2. Reflect as much of the content of the child's behavior as possible, be it verbally or non-verbally expressed.

3. Give no direction, help or information to the child, unless he specifically requests it.

4. Do not bother the child with questions, ask as few as possible.

5. When praising the child, be sure to praise his behavior and not him as a person.

6. Pay attention to the child at all times, restrict him only when he begins to destroy something or begins to hurt you physically, and try and be yourself.

Appendix E.

Categorization of Undergraduate Behavior

(Mean percentage of agreement between coders in parentheses)

1. Reflection of verbal content. S (student) selects an aspect of C's (child) remark and restates the content of that remark. (.86)
   Ex: C-That's a car, this is a truck.
   S-That's a car, this is a truck.

2. Reflection of feelings. S restates the feelings stated by C. (.99)
   Ex: C-I don't like to play in this room.
   S-You don't like it at all in here.

3. Reflection of motor activity. S describes the motor behavior of C. (.91)
   Ex: C examines marbles.
   S-Now you're picking up the green marble.

4. Interpretation. S verbalizes C's feeling or thought state by inference from C's verbal or non verbal behavior. That is, S's statement is not literally based upon C's behavior, but has the quality of being an inference which may be correct or incorrect. (.82)
   Ex: C is punching the bobo doll.
   S-You feel angry right now.

5. Participation in fantasy-initiating. S is contributing to the development of C's fantasy by offering new content, verbalizing as yet unstated feelings or thought, or by beginning the fantasy, even before C is clearly thinking or acting on a level of fantasy. (.75)
   Ex: Each with a telephone.
   S-Hello, is Susan there?
   C-Yes, this is Susan.
   S-Can you come out to play, this is Sharon.
   C-O.K.
   S-O.K. bye. (hangs up)

   C is shooting a gun at an animal.
   S-And you're shooting the elephant dead. You're going to kill all the animals in the playroom.

6. Participation in fantasy-reciprocating. S is involved in C's fantasy behavior, but clearly does not contribute anything more to its structure or content. Participation can take the form of merely watching, laughing, reflecting motor or verbal content, or responding to C's cues in a passive manner. (.73)
   Ex: C and S have puppets
   C-I'm a strong alligator.
   S-You're a strong alligator.
   C-Yea, and you're a chicken.
   S-The chicken's going to lose its neck.

Appendix E. (Cont'd.)

7. Nonattention. S directs his attention to something other than C. (.79)
Ex: S fixes truck while C looks for something.

8. Compliance-clarified. S responds to C's commands, suggestions, or requests, but only after reflecting C's request, command, suggestion, etc. (.85)
Ex: C-Go get the ball.
S-You want me to get the ball. All right.

9. Compliance-unclarified. S responds to C's suggestion, command, or request, without hesitation, clarification, or conveyance to C as to what C is requesting, suggesting, or commanding. (.88)
Ex: C-Go get the ball.
S-All right. (Goes and gets the ball).

10. Statement of own emotion. S verbalized his own feelings. (.99)
Ex: I'm sorry that you didn't go to the show.

11. Genuineness: S is truly "with" himself. He does not appear anxious or uncomfortable. Those things which he says or does seem to come naturally to him. (.70 This category was rated on a scale from zero to three).

12. Praise. S expresses approval of C's productions or behavior, but not of C as a person. (.87)
Ex: That's a fine picture you've made.

13. Offering Information. Either verbally, demonstratively, or both, S offers knowledge or guidance. (.75)
Ex: C-Why won't this open (cash register).
S-You have to press the keys first (S either simply says it, or he actually performs it, but in either instance, C is in some manner being instructed.

14. Giving help. S gives physical aid to C, without instruction or attempt to involve C in the completion of the task. S is not helping C to master the problem, but simply responding to an unstated request for assistance. (.69)
Ex: C-Why won't this open? (cash register)
S-Takes cash register, opens it, and gives back to C.

15. Orienting. Limits, boundaries, and roles are indicated by S. (1) Boundaries of the situation are indicated by S. Ex: S-You may do whatever you like here. (2) S structures time. Ex: We have ten minutes left to play. (3) Roles are indicated by leaving responsibilities to C. Ex: I can't tell you what to do, you must decide for yourself. Ex: You can use these things in any way you want. (.69)

Appendix E. (Cont'd.)

16. Directing. S attempts to influence C by command or suggestion, i.e., S tells C what to do (.80)
Ex: S-If you don't clean up, we can't come here any more.
Ex: S-Put the gun on the table.
Ex: S-Get me the book, will you.

17. Setting Limits-explanation. S attempts to modify C's behavior by reducing the intensity, speed or manner of executing it, he apparently attempts to stop or reduce the activity. Verbal explanation for limit setting is offered. (.99)
Ex: S-Be careful or you will get hurt.
Ex: S-I don't think you should pound the microphone so hard. It might break.
Ex: S-I know you'd like to stay here longer, but we have to go until next week.
Ex: S-Bobo dolls are fun, but not for biting, only for punching.

18. Setting limits without elaboration or explanation. S attempts to reduce the intensity of, speed of, or manner of executing C's behavior, without offering any reason, admonition, or conveying any understanding of C and/or his behavior. (.99)
Ex: C is putting the bobo doll out the window.
S-Stop that, bring it back here.
Ex: Don't leave your coat on the floor.
Ex: Don't shoot the dart gun at my face.
Ex: Leave the microphone alone, Jim.
Ex: S pushed C away from the microphone. "Get away".

19. Asks question. S interrogates C. (.84)
Ex: S-What do you want to do today, Jim?
S-How many brothers do you have, Jim?

20. Criticism. S expresses disapproval of C or C's productions, either subtly or very obviously. (.70)
Ex: C is shooting at target.
S-You missed again.
C is drawing a picture.
S-That doesn't look like Beaumont tower.

21. Warmth. S conveys a general liking for C, either through his facial, vocal or postural expressions. (.65) (This category was rated on a scale from zero to three).

22. Rejection. S conveys to C that either C or C's productions are not acceptable. Rejection can be conveyed through vocal, facial, or postural expressions. (.71 This category was rated on a scale from one to three).

Appendix F.

Categorization of children's behavior with undergraduate.
(Mean percentage of agreement in parentheses.)

1. Statement of personal thought or behavior in the context of reality.
C verbalized an idea, experience, or behavior in reference to herself, either through the use of a personal pronoun (I or me), or through the verbalization of her own action. (.65)
Ex: C-I am five feet tall.
C-I went to the store yesterday.
C-I can count to ten.
C-(drawing a picture) A horse with red eyes.
C-(hitting the bobo doll) Boom.

2. Statement of personal thought or behavior in the context of fantasy.
Same as #1 above, except that the verbalized self reference occurs within C's fantasy involvement, i.e., while C is assuming a role other than his own. (.76)
Ex: C-Hello Mr. Mouse, I have been waiting for you. I'm going to give you some cheese.
C-(talking on telephone) Susan, this is your mother. Come home right away. I want to talk to you.
C-(punching the bobo) I hurt him. I bit his nose.

3. Statement of personal feelings in the context of reality.
C verbalizes emotional feelings of the past, present, or future. (.77)
Ex: I like (love, hate, am scared of, feel bad about, am happy, want, etc.)

4. Statement of personal feelings in the context of fantasy.
Same as #3 above, except that verbalization of feelings occurs within context of C's fantasy involvement. (.71)
Ex: (playing with puppets) Now, Julie, if you ever do that again I'm going to be very angry.
(holding the crocodile) The crocodile hates the lion.

5. Statement of interpersonal awareness in the context of reality.
C verbalizes a comprehension of his involvement in a relationship with another person, either the student or someone else. Often occurs using the pronoun "we". (.55)
Ex: We can play chinese checkers.
You bring me the chair.
Mommy and me and daddy makes three.
I am older than my brother.

6. Statement of interpersonal awareness in the context of fantasy.
Same as #5 above, except that the verbalization occurs within an unreal context. (.86).
Ex: C-The big bozo is going to beat the little bozo up.
C-The doctor is going to give you a shot.

Appendix F. (Cont'd.)

7. Statement of external condition.
C verbalizes his awareness of some environmental fact, one not linked to human relationships. (.68)
Ex: It's hot in here.
It's getting dark outside.
The toys have changed.
Hey, there's a big bobo dol.

8. Statement of expectation, intention, or prediction.
C verbalizes and anticipation of an event, to come in the future. (.57)
Ex: After I put these marbles away, I'm going to punch the bobo.
Next week we can play again, o.k.?
If I don't clean up the floor, Mommy's going to be angry.
I bet there is someone behind the wall.

9. Behavioral expression of aggression in reality (R) in fantasy (F).
C expresses anger, or aggression, either in fantasy or reality. May be verbalization, behavior, or both. (.74)
Ex: punching the bobo doll; shooting a dart gun at the student; shooting at the animals (not in a manner of target practice) spanking a puppet, hitting oneself on the head, knocking down the bowling pins (again, not in a manner of mastery or perfecting one's skill), exclaiming "You bad toy".

10. Behavioral expression of affection in reality (R) or fantasy (F).
C expresses warmth either in fantasy or in reality non verbally. Verbalizations may accompany behavior, but are not sufficient for presence of behavioral expression. (.87)
Ex: Giving milk to a baby doll. Kissing the bobo. Giving candy to the bobo, stroking a puppet.

11. Behavioral expression of excitement.
C expresses his excited state berbally or non verbally. This behavior differs from expressing aggression in that it is more diffuse and less attacking. (.85)
Ex: hilarious laughter; rolling on the floor; playing nok-hockey in a fury; bouncing on the bobo doll.

12. Behavioral expression of object mastery (creativity).
C attempts to manipulate, control, improve, understand, improvise, or destroy an object. (.75)
Ex: Target shooting; trying to understand how the chinese checkers are played, deflating the bobo doll; catching a football; trying to knock down the bowling pins; trying to get the rings on the hoop; doing the hula hoop; trying to fix a broken toy; using a caracass in place of an iron, in order to iron clothes; asking about, or playing with the microphone.

13. Direction.
C attempts to influence S's behavior by command, strong suggestion, or non verbal action. Essentially, C tells S what to do. (.71)

Appendix F. (Cont'd.)

Ex: Go get the blocks and put them over there.
If you get the blocks, then we can build.
C gives S a block while building a house.

14. Seeks help.
C explicitly asks S for assistance, not in a direction style. (.75)
Ex: Would you go get the blocks?
Can you hold this for me?
I can't do it. Please untie my shoes?

15. Changing involvement.
C changes his focus of interest from one activity or toy to another. (.76)
Ex: C plays with car. Stops. Then goes and punches bobo.

16. Nonattention-self involvement.
C directs his attention to something other than S, not merely glancing away at a toy, but becoming involved in an activity, and seemingly becoming unaware that S is in the room. Nonattention must be at least ten seconds. (.63)

17. Nonrecognition.
C does not respond to the stimulation offered by S. S may ask questions, reflect feelings, describe C's behavior, or direct C. C will act as if he has not heard S. (.70)

Note: Nonattention differs from nonrecognition in that the former is in conjunction with a stimulus emitted by S, whereas the latter requires no stimulation on the part of S.

18. Joint participation in activity. (D, S, or N)
Dominant role-C and S are mutually engaged in an activity, and C is clearly directing the course of involvement, suggesting, orienting, and seeking to put S in a submissive role. (.53)
Submissive role-C and S are mutually engaged in an activity and clearly C is responding to the direction, suggestion, and orientation of S; C is naturally complying and being comfortable in S's domination. (.62)
Nondiscernible role-C and S are mutually engaged in activity, and clearly neither C nor S acts in a dominant or submissive role. There is a free give and take of suggestions, orientations, questions, and directions. (.70) This category is coded on a scale from one (D) to five (S) for each five minute interval.

19. Fantasy behavior (general).
C uses objects, materials, activities, or situations as though they had properties or attributes other than those which they apparently or actually seem to possess.

Appendix G.

Categorization of Children's Behavior in Groups

1. Verbal Comprehension Skill. The degree to which C verbalizes his involvement as a self with the selves of the other children. A child can be highly verbal yet relatively unaware and incommunicative if his verbalizations are centered around externals. On the other hand, a non verbal child is an unaware and incommunicative child.

   Rating: 1-C is wholly nonverbal and silent.
   2-C is substantially nonverbal but does speak occasionally.
   3-C is periodically communicative in that he talks with the other children about himself, what he is doing and what they are doing, feeling, thinking, etc.; there is some degree of interpersonal communication to and about each other.
   4-C is frequently conversant with other children about himself and about the others.
   5-C is almost continuously conversant with the other children about the feelings, thoughts and behavior of himself and of theirselves.

2. Effective Coping Skills. The degree to which C feels comfortable in the interaction and the degree to which the child "masters" the experience by being creatively involved in either an activity or an interaction with another child, or both. The question to ask is "Is he master of himself in this situation, or does he suffer?"

   Rating: 1-C appears highly anxious, uncertain, suspicious or frightened.
   2-C appears somewhat anxious, uncertain, suspicious or frightened, but is not completely this way. There is come appearance of confidence or willingness to enter the situation.
   3-C does not appear to be anxious, uncertain, suspicious, etc. He does not, however, seem to be able to be flexible. He stays with one toy, one child, or one activity. There is an element of rigidity in his coping behavior.
   4-C appears quite sure of himself, and can be spontaneous in his involvements and interactions.
   5-C is very sure of himself, is creative and spontaneous in action, and seems to be happy being with the other two children.

3. Interpersonal Skills. The degree to which C forms effective social relationships with the other children. A measure of how well he gets along with the others.

   Rating: 1-C is withdrawn from involvement with the others.
   2-C is basically not part of the interaction, but on

Appendix G. (Cont'd.)

occasion will speak, attract attention, or attempt to interact.

3-C is involved with the others, but in a way which does not seem satisfying to them. Examples would be being highly controlling, aggressive or challenging.

4-C is basically functioning well with others but there are some dysfunctional elements in his behavior, such as social aggression or excessive dominance.

5-C is essentially cooperative and congenial with the other children. The way he behaves seems to attract the others and seems to sustain a mutually satisfying interpersonal relationship.

Appendix H.

Table 15.

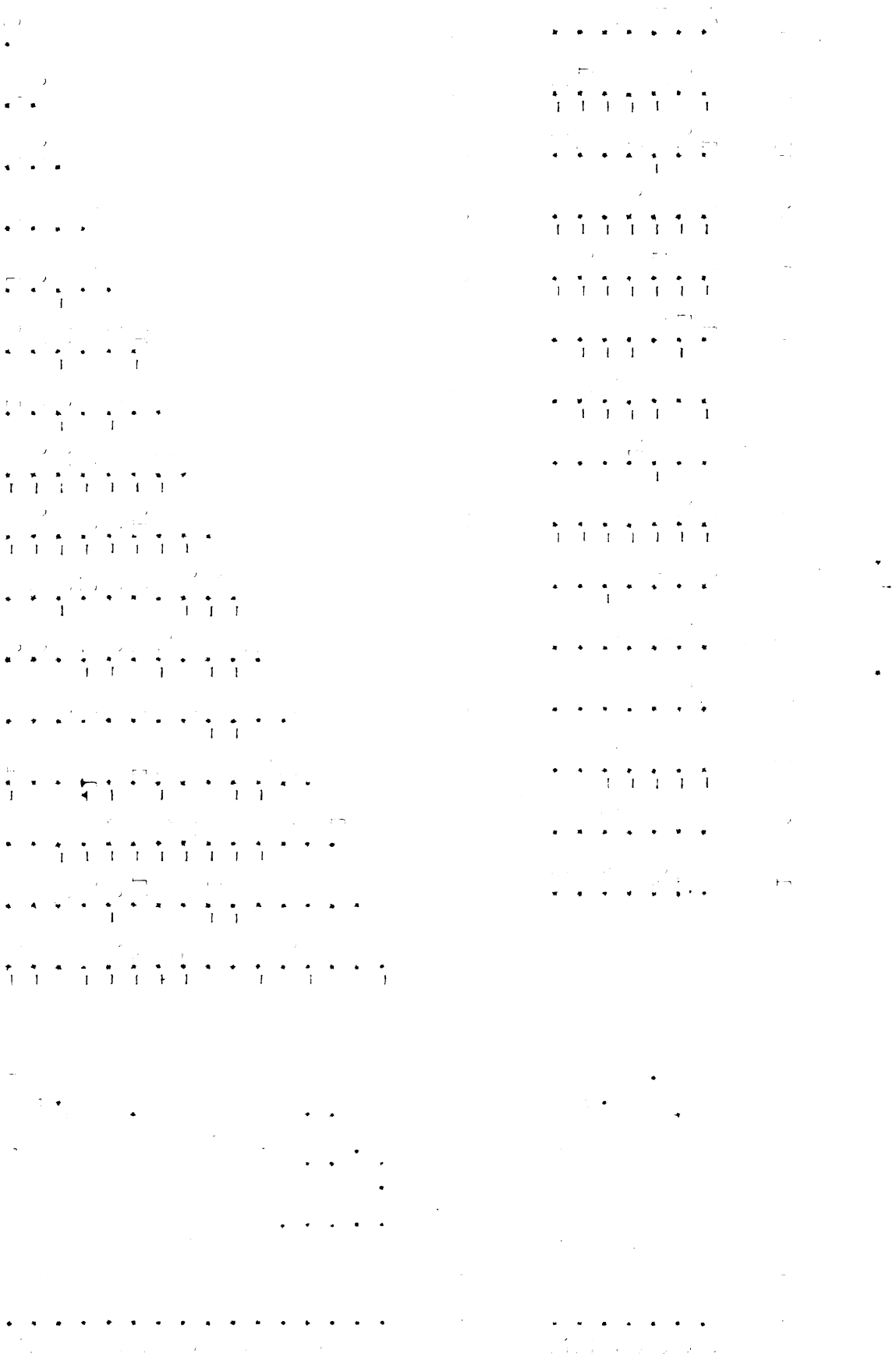
Intercorrelations of All Dependent Variables.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Refl. verb. cont.															
2. Refl. mot. behav.	.84														
3. Ask question	-.61	-.76													
4. Interpretation	.73	.81	-.78												
5. Initiating fant.	.39	.53	-.45	.61											
6. Recip. part. fant.	.84	.80	-.63	.71	.61										
7. Nonattention (stu.)	-.81	-.82	.66	-.79	-.57	-.77									
8. Compliance clarif.	.76	.62	-.39	.33	.19	.68	-.56								
9. Criticism	-.50	-.49	.62	-.53	-.32	-.39	.58	-.30							
10. Give help	-.18	.02	-.12	-.20	-.10	-.24	-.01	-.09	-.05						
11. Orient	-.50	-.54	.37	-.59	-.37	-.67	.34	-.57	.30	.19					
12. Direction (stu.)	-.69	-.63	.76	-.76	-.52	-.67	.70	-.47	.79	.21	.56				
13. Warmth	.53	.51	-.25	.49	.42	.50	-.78	.45	-.54	.13	.30	-.52			
14. Rejection	-.58	-.54	.46	-.55	-.25	-.41	.66	-.31	.77	.21	-.29	.63	-.60		
15. Genuineness	.23	.18	.29	.23	.31	.16	-.33	.00	-.06	.28	-.08	-.07	.58	-.14	
16. State p.t.b (R)	.53	-.72	.73	-.55	-.35	-.58	.55	-.49	.48	-.18	.38	.54	-.19	.41	-.34
17. State p.t.b (F)	.65	.49	-.36	.45	.52	.84	-.45	.64	-.10	-.36	-.63	-.47	.26	-.13	.12
18. State. feel. (R)	-.36	.18	.00	.07	.09	.20	.23	-.45	.41	.43	.12	.23	-.38	.15	-.14
19. State. int. aw. (R)	.06	-.20	.46	-.21	.08	.17	.06	.26	.45	-.35	-.24	.13	.10	.11	-.39
20. State. int. aw. (F)	.58	.59	-.38	.47	.61	.77	-.44	.59	-.24	-.17	-.71	-.52	.38	-.23	.22
21. State. Future	.05	.02	-.08	-.03	-.07	.23	-.03	.21	.41	.29	-.13	.15	-.15	.15	.43
22. Reality aggression	.33	.52	-.48	.27	.29	.55	-.36	.27	-.24	.14	-.35	-.23	.10	-.19	-.13
23. Excitement	-.40	-.39	.41	-.36	-.26	-.45	.16	-.34	.04	.00	.53	.44	.13	.16	-.13
24. Object mastery	-.29	-.48	.37	-.27	-.48	-.59	.13	-.21	.09	.15	.68	.29	.07	-.06	.27
25. Direction (child)	.41	.27	.02	.07	.15	.59	-.31	.67	.14	-.21	-.42	-.17	.32	-.02	.28

Table 15. (Cont'd.)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
26. Seek help	.48	.60	-.37	.38	.40	.29	-.36	.50	-.14	.15	-.27	-.30	.15	-.16	.11
27. Change involve.	.15	.26	-.10	.13	.14	.40	-.12	.10	.01	-.31	-.66	-.14	.12	.03	.16
28. Nonattention (chi.)	.12	.36	-.59	.45	.22	.15	-.18	-.15	-.47	.02	-.21	-.49	-.05	-.35	.11
29. Nonrecognition	.45	.68	-.59	.68	.44	.40	-.48	.12	-.32	-.06	-.20	-.42	.16	-.37	.06
30. Dominant partic.	.61	.63	-.52	.50	.26	-.47	-.59	.51	-.52	-.14	-.53	-.64	.40	-.68	.38
31. Fantasy behavior	.65	.68	.52	.58	.66	.86	-.53	.60	-.28	-.10	-.73	-.57	.34	-.31	.05
32. Fantasy aggression	.63	.71	.64	.45	.44	.74	-.54	.48	.33	.21	-.49	-.41	.23	-.30	.14

Variable	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
17. State. p.t.b (F)	-.22															
18. State. feel. (R)	.23	.05														
19. State. int. aw. (R)	.32	.46	.01													
20. State. int. aw. (F)	-.37	.76	.02	.20												
21. State. Future	.03	.35	.52	.38	.25											
22. Reality aggression	-.66	.23	-.04	-.33	.50	.15										
23. Excitement	.47	-.41	-.27	-.16	-.60	-.37	-.29									
24. Object mastery	.47	-.51	-.05	.08	-.69	-.04	-.72	.50								
25. Direction (child)	-.15	.41	-.23	.57	.36	.34	-.02	-.33	.00							
26. Seek help	-.39	.22	-.11	-.15	.34	-.03	.00	-.36	-.13	.48						
27. Change involve.	-.10	.31	-.11	.14	.26	.16	.30	-.12	-.54	.17	-.14					
28. Nonattention	-.62	-.20	-.01	-.55	.02	-.29	.38	-.39	-.34	-.20	.11	.17				
29. Nonrecognition	-.64	.03	-.10	-.41	.15	-.16	.35	-.31	-.29	.14	.49	.23	.74			
30. Dominant partic.	.68	.20	-.08	.09	.37	.06	-.34	-.49	-.22	-.30	-.33	-.09	.47	.47		
31. Fantasy behavior	-.48	.84	.06	.19	.95	.29	.50	-.62	-.72	.29	.35	.29	.08	.22	.42	
32. Fantasy aggression	-.74	.48	.04	-.15	.68	.28	.88	-.44	-.68	.16	.23	.18	.33	.38	.46	.73



Appendix I.

Table 16.

Analyses of Variance of Child Dependent Variables. [1,2]

Variable	MS T	MS Z	MS S	MS TxS	MS Y	F T/Z	F S/Y	F TS/Y
1. State. personal thought/behavior (R).	50.07	33.78	43.72	17.01	11.53	1.48	3.78*	1.47
2. State. personal thought/behavior (F).	109.79	5.64	5.85	26.96	6.63	19.45**	0.88	4.06
3. State. interpersonal awareness (R)...	3.12	51.31	13.40	12.51	13.10	0.06	1.02	0.95
4. State. interpersonal awareness (F)...	188.90	29.07	21.12	33.46	9.05	6.49*	2.33	3.69*
5. State. future.....	3.12	8.01	1.40	5.40	4.61	0.39	0.30	1.17
6. Reality aggression.....	39.18	28.46	4.01	0.24	12.02	1.32	0.33	0.02
7. Fantasy aggression.....	140.16	20.66	10.90	1.16	6.55	6.78*	1.66	0.17
8. Excitement.....	78.24	14.44	12.86	5.62	7.37	5.41*	1.75	0.76

*p<.05
**p<.01

[1]df T=1, df S=2, df TS=2, df Z=16, df Y=32

[2]T=Training Z=Subjects within groups error
S=Sessions Y= SxSubjects within groups error
MS=Mean square F=F ratio

Table 16. (Cont'd.)

Variable	MS T	MS Z	MS S	MS TxS	MS Y	F T/Z	F S/Y	F TS/Y
9. Object mastery	80.66	158.75	136.50	5.16	20.75	0.50	6.57**	0.25
10. Direction	46.29	22.26	0.35	10.12	4.21	2.07	0.08	2.40
11. Change involvement	48.16	27.41	16.07	0.66	6.72	1.75	2.39	0.09
12. Nonattention	143.40	38.47	6.74	7.18	13.40	3.72	0.50	0.53
13. Nonrecognition	408.07	41.62	40.22	9.85	20.37	11.96**	1.97	0.48
14. Dominant participation	83.12	35.26	0.51	6.74	2.31	2.36	0.22	2.90
15. Fantasy behavior	486.00	37.00	24.51	48.32	11.57	13.13**	2.11	4.16*

*p<.05
**p<.01

[1]df T=1, df S=2, df TS=2, df Z=16, df Y=32

[2]T=Training Z=Subjects within groups error
S=Session Y=SxSubjects within groups error
MS=Mean square F=F ratio

Appendix J.

Table 17.

Analyses of Variance of Student Dependent Variables.[1]

Variable	MS T	MS Z	MS S	MS TxZ	MS Y	F T/Z	F S/Y	F TS/Y
1. Reflection of verbal content.....	740.74	19.78	22.16	6.01	8.63	37.43**	2.56	0.69
2. Reflection of motor behavior.....	1066.66	37.87	22.38	12.38	8.80	28.16**	2.54	1.40
3. Interpretation.....	462.29	37.39	8.12	36.69	5.21	12.36**	1.55	7.02**
4. Ask questions.....	1031.40	10.58	64.68	50.46	7.88	97.41**	8.20**	6.39**
5. Initiating fantasy behavior.....	62.29	63.93	26.24	8.68	7.50	0.90	3.49*	1.15
6. Reciprocal part. in fantasy.....	711.40	20.62	5.72	13.68	7.47	34.50**	0.76	1.83
7. Nonattention.....	832.29	94.48	6.16	0.24	5.89	8.80**	1.04	0.04
8. Compliance-clarified.....	31.12	4.07	0.96	0.74	1.53	7.64*	0.62	0.04

[1]Symbols are identical to those used in Appendix I.

*$p < .05$

**$p < .01$

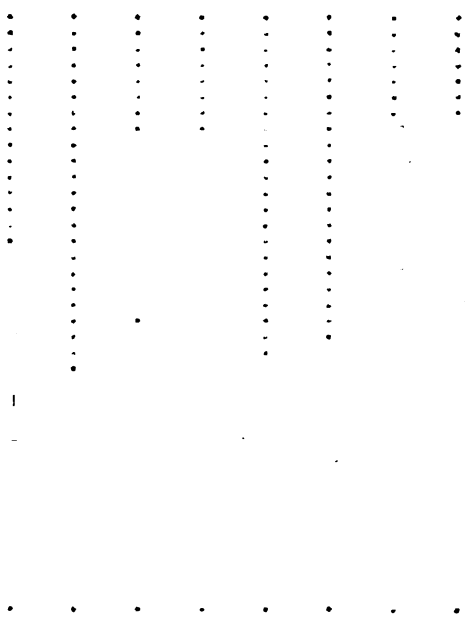


Table 17. (Cont'd.)

Variable	MS T	MS Z	MS S	MS TxZ	MS Y	F T/Z	F S/Y	F TS/Y
9. Criticism	143.40	6.12	1.72	1.90	2.02	23.43**	0.85	0.95
10. Give help	11.57	22.37	3.72	1.68	0.97	0.51	3.81*	1.72
11. Orienting	9.79	38.56	4.01	7.35	6.12	0.25	0.65	1.20
12. Direction	1048.96	28.44	0.57	3.12	5.01	36.87**	0.11	0.62
13. Warmth	12.51	4.71	0.38	2.46	0.57	2.65	0.68	4.30*
14. Rejection	46.29	3.60	0.07	0.07	0.59	12.89**	0.12	0.12
15. Genuineness	0.90	6.51	0.51	4.51	0.78	0.13	0.65	5.72**

[1]Symbols are identical to those used in Appendix I.
*$p < .05$
**$p < .01$